Name _____

Add and Subtract Like Fractions

Find the sum or difference. Write it in simplest form.

1. $\frac{5}{7} + \frac{1}{7}$ _____

2. $\frac{4}{9} + \frac{3}{9}$ _____

3. $\frac{4}{12} + \frac{8}{12}$ _____

4. $\frac{3}{11} + \frac{7}{11}$ _____

5. $\frac{2}{8} + \frac{4}{8}$ _____

6. $\frac{7}{15} + \frac{4}{15}$ _____

7. $\frac{5}{9} + \frac{1}{9}$ _____

8. $\frac{1}{4} + \frac{2}{4}$ _____

9. $\frac{4}{7} - \frac{2}{7}$ _____

10. $\frac{3}{5} - \frac{1}{5}$ _____

11. $\frac{6}{12} - \frac{2}{12}$ _____

12. $\frac{3}{4} - \frac{2}{4}$ _____

13. $\frac{7}{9} - \frac{2}{9}$ _____

14. $\frac{4}{6} - \frac{1}{6}$ _____

15. $\frac{3}{8} - \frac{2}{8}$ _____

16. $\frac{9}{10} - \frac{5}{10}$ _____

17. George ran $\frac{3}{8}$ mile on Sunday and $\frac{2}{8}$ mile on Monday. How much farther did George run on Sunday than on Monday?

_____

18. Lona pulled the wagon for $\frac{4}{10}$ hour. Eric pulled the wagon for $\frac{1}{10}$ hour. For how long did they pull the wagon in all?

_____

Mixed Review

19. $\begin{array}{r} 396 \\ \times\ 54 \\ \hline \end{array}$

20. $\begin{array}{r} 603{,}421 \\ -\ 82{,}798 \\ \hline \end{array}$

21. $\begin{array}{r} 1.62 \\ \times\ 66 \\ \hline \end{array}$

22. $\begin{array}{r} 0.26 \\ \times\ 0.29 \\ \hline \end{array}$

23. $27\overline{)28.35}$

24. $18\overline{)1{,}368}$

Name _____

Add and Subtract Unlike Fractions

Use fraction bars to find the sum.

1. $\frac{1}{8} + \frac{1}{4}$ _____

2. $\frac{1}{2} + \frac{1}{10}$ _____

3. $\frac{4}{5} + \frac{1}{10}$ _____

4. $\frac{1}{2} + \frac{1}{8}$ _____

5. $\frac{1}{3} + \frac{1}{2}$ _____

6. $\frac{3}{5} + \frac{3}{10}$ _____

7. $\frac{1}{12} + \frac{1}{3}$ _____

8. $\frac{7}{10} + \frac{1}{5}$ _____

Use fraction bars to find the difference.

9. $\frac{5}{6} - \frac{1}{2}$ _____

10. $\frac{9}{10} - \frac{1}{5}$ _____

11. $\frac{3}{4} - \frac{1}{2}$ _____

12. $\frac{11}{12} - \frac{5}{6}$ _____

13. $\frac{7}{8} - \frac{3}{4}$ _____

14. $\frac{2}{3} - \frac{1}{4}$ _____

15. $\frac{1}{2} - \frac{2}{5}$ _____

16. $\frac{3}{8} - \frac{1}{4}$ _____

Mixed Review

Write each fraction in simplest form.

17. $\frac{12}{15}$ _____

18. $\frac{9}{24}$ _____

19. $\frac{25}{30}$ _____

20. $\frac{21}{49}$ _____

21. $\frac{20}{36}$ _____

22. $\frac{5}{4}$ _____

23. $\frac{18}{24}$ _____

24. $\frac{15}{45}$ _____

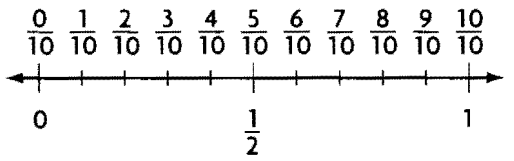
25. $\frac{9}{27}$ _____

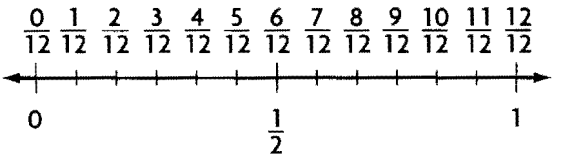
26. $\frac{16}{28}$ _____

Name _____

Estimate Sums and Differences

Write whether the fraction is closest to 0, $\frac{1}{2}$, or 1.





1. $\frac{4}{10}$ _____

2. $\frac{11}{12}$ _____

3. $\frac{2}{10}$ _____

4. $\frac{7}{12}$ _____

5. $\frac{7}{8}$ _____

6. $\frac{3}{8}$ _____

7. $\frac{2}{9}$ _____

8. $\frac{1}{8}$ _____

Estimate each sum or difference.

9. $\frac{1}{2} + \frac{3}{4}$ _____

10. $\frac{1}{2} + \frac{5}{8}$ _____

11. $\frac{1}{4} + \frac{5}{9}$ _____

12. $\frac{6}{8} + \frac{2}{4}$ _____

13. $\frac{11}{12} - \frac{1}{9}$ _____

14. $\frac{5}{6} - \frac{3}{5}$ _____

15. $\frac{8}{9} - \frac{3}{4}$ _____

16. $\frac{7}{9} - \frac{5}{8}$ _____

Estimate to compare. Write $<$ or $>$ in each ◯.

17. $\frac{5}{8} + \frac{2}{8}$ ◯ $\frac{1}{5} + \frac{2}{5}$

18. $\frac{6}{7} - \frac{3}{8}$ ◯ $\frac{7}{9} - \frac{3}{4}$

19. $\frac{6}{9} + \frac{3}{5}$ ◯ $\frac{7}{8} + \frac{3}{5}$

20. $\frac{5}{6} - \frac{1}{4}$ ◯ $\frac{3}{6} - \frac{1}{3}$

Mixed Review

21. $14\overline{)37.38}$

22. $\begin{array}{r} 56{,}789 \\ \times \quad 17 \\ \hline \end{array}$

23. $\begin{array}{r} 76.18 \\ \times \quad 204 \\ \hline \end{array}$

24. $0.07\overline{)3.0086}$

Name _____

Use Common Denominators

Find the sum or difference. Write it in simplest form.

1. $\frac{1}{6} + \frac{1}{3}$ _____
2. $\frac{5}{8} - \frac{1}{4}$ _____
3. $\frac{3}{10} + \frac{3}{5}$ _____
4. $1 - \frac{1}{5}$ _____
5. $\frac{3}{4} - \frac{1}{2}$ _____
6. $\frac{1}{2} + \frac{1}{10}$ _____
7. $\frac{1}{2} + \frac{2}{5}$ _____
8. $\frac{7}{10} - \frac{3}{5}$ _____
9. $\frac{3}{8} + \frac{1}{4}$ _____
10. $\frac{1}{6} + \frac{2}{9}$ _____
11. $\frac{3}{4} - \frac{1}{3}$ _____
12. $\frac{5}{8} + \frac{1}{2}$ _____
13. $\frac{2}{3} - \frac{1}{6}$ _____
14. $\frac{4}{5} - \frac{1}{2}$ _____
15. $\frac{5}{12} + \frac{1}{4}$ _____
16. $\frac{5}{6} - \frac{7}{12}$ _____

Find the value of n.

17. $\frac{3}{4} + n = 1$ _____
18. $\frac{7}{10} - n = \frac{3}{10}$ _____
19. $n + \frac{5}{12} = \frac{7}{12}$ _____
20. $\frac{1}{2} - n = \frac{3}{8}$ _____

Mixed Review

Find the value.

21. 4^3 _____
22. 9^1 _____
23. 0^6 _____
24. 10^4 _____
25. 13^2 _____

Find the prime factorization of the number. Use exponents when possible.

26. 81 _____
27. 90 _____
28. 98 _____
29. 56 _____
30. 72 _____

Name _____

Use the Least Common Denominator

Find the LCD. Then add or subtract.

1. $\frac{1}{2} + \frac{2}{8}$ _____
2. $\frac{2}{5} + \frac{1}{3}$ _____
3. $\frac{6}{8} + \frac{1}{4}$ _____
4. $\frac{9}{12} - \frac{2}{4}$ _____

Find the sum or difference. Write it in simplest form.

5. $\frac{8}{16} - \frac{2}{8}$ _____
6. $\frac{2}{10} + \frac{3}{5}$ _____
7. $\frac{7}{9} - \frac{1}{3}$ _____
8. $\frac{4}{15} + \frac{2}{3}$ _____
9. $\frac{3}{8} - \frac{1}{4}$ _____
10. $\frac{6}{12} - \frac{2}{6}$ _____
11. $\frac{9}{10} - \frac{4}{5}$ _____
12. $\frac{6}{8} - \frac{1}{2}$ _____
13. $\frac{5}{8} + \frac{5}{16}$ _____
14. $\frac{4}{5} + \frac{1}{10}$ _____
15. $\frac{5}{9} - \frac{7}{18}$ _____
16. $\frac{1}{2} - \frac{3}{14}$ _____
17. $\frac{2}{20} + \frac{4}{5}$ _____
18. $\frac{1}{3} - \frac{2}{9}$ _____
19. $\frac{2}{6} - \frac{5}{18}$ _____
20. $\frac{3}{8} + \frac{2}{4}$ _____

Mixed Review

21. Jade swam $\frac{1}{2}$ mile on Monday. On Wednesday she swam $\frac{3}{8}$ mile. How many miles did Jade swim in all?

_____

22. Monty spent $\frac{4}{5}$ hour mowing his lawn. Then he spent $\frac{2}{10}$ hour mowing his neighbor's lawn. How much longer did it take Monty to mow his lawn than his neighbor's lawn?

_____

23. $14\overline{)39.9}$

24. $\begin{array}{r} 367{,}112 \\ \times \quad 60 \\ \hline \end{array}$

25. $\frac{1}{4} + \frac{3}{4}$ _____

26. $\begin{array}{r} 36.725 \\ - \ 14.294 \\ \hline \end{array}$

Name _____

Problem Solving Strategy

Work Backward

Work backward to solve.

1. Jerry's kitten grew 3 cm between the ages of 4 months and 5 months. The kitten grew 2 cm between the ages of 5 months and 6 months. At 6 months, the kitten is 19 cm tall. How tall was Jerry's kitten when it was 4 months old?

_____

2. Denise went shopping at the mall. She spent $11.35 on a new T-shirt and $2.25 for hair ribbons. Lunch cost $4.50, and a drink cost $1.25. She came home with $10.65. How much money did Denise have before she went to the mall?

_____

3. Kirk grew a crystal in science class. On Monday it was $\frac{13}{16}$ inch tall. It had grown $\frac{1}{4}$ inch between Friday and Monday. It had grown $\frac{1}{2}$ inch between Tuesday and Friday. How tall was Kirk's crystal on Tuesday?

_____

4. Terry planted a gladiolus bulb. On Wednesday it was $\frac{7}{8}$ inch tall. It had grown $\frac{1}{4}$ inch between Tuesday and Wednesday. It had grown $\frac{3}{8}$ inch between Monday and Tuesday. How tall was Terry's gladiolus on Monday?

_____

Mixed Review

Write the value of the 4 in each of these numbers.

5. 14,790.12 _____

6. 0.4913 _____

7. 499,765,315 _____

8. 0.045 _____

Solve.

9.
$$\begin{array}{r} 4.80 \\ 6.62 \\ +\ 9.90 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 17.59 \\ 33.81 \\ +\ 67.08 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 19{,}515 \\ 7{,}563 \\ +\ 27{,}480 \\ \hline \end{array}$$

12.
$$\begin{array}{r} \$15.99 \\ 15.99 \\ +\ 15.99 \\ \hline \end{array}$$

Name _____

Add Mixed Numbers

Find the sum in simplest form. Estimate to check.

1. $2\frac{3}{8} + 3\frac{1}{4}$

2. $4\frac{1}{3} + 3\frac{1}{6}$

3. $1\frac{5}{12} + 2\frac{1}{6}$

4. $3\frac{5}{8} + 3\frac{3}{4}$

5. $1\frac{1}{10} + 4\frac{2}{5}$

6. $3\frac{1}{9} + 4\frac{1}{3}$

7. $2\frac{3}{5} + 5\frac{7}{10}$

8. $4\frac{1}{12} + 2\frac{1}{3}$

Algebra Find the value of *n*.

9. $3\frac{1}{4} + 3\frac{7}{8} = n$ _____

10. $n + 5\frac{3}{10} = 8\frac{1}{10}$ _____

11. $7\frac{2}{3} + n = 9\frac{1}{12}$ _____

12. $2\frac{2}{3} + n = 6\frac{5}{6}$ _____

13. $n + 3\frac{5}{6} = 5\frac{1}{3}$ _____

14. $n + n = 8\frac{1}{2}$ _____

15. $5\frac{5}{12} + 2\frac{1}{6} = n$ _____

16. $8\frac{2}{9} + n = 9\frac{5}{9}$ _____

Mixed Review

17. Tim and Al are making a tower. They each are building separate sections. Tim's section is $\frac{7}{8}$ foot tall, and Al's section is $\frac{1}{2}$ foot tall. How tall will the tower be when they join the sections?

_____

18. Alison and Felicia worked for the local charity. Alison worked 5 hours, and Felicia worked 3 hours more than Alison. How many hours did the girls work for the charity in all?

_____

19. $21.376 + 9.653$

20. $145.637 - 18.910$

21. $\$10 + (\$6 - n)$ if $n = \$3$ _____

22. $5(3 \times 7) = n$ _____

Name _____

Subtract Mixed Numbers

Find the difference in simplest form. Estimate to check.

1. $3\frac{7}{10}$
   $-1\frac{2}{5}$

2. $5\frac{3}{4}$
   $-2\frac{1}{8}$

3. $8\frac{5}{6}$
   $-2\frac{1}{12}$

4. $7\frac{1}{2}$
   $-4\frac{1}{6}$

5. $9\frac{9}{10}$
   $-4\frac{3}{5}$

6. $5\frac{4}{9}$
   $-3\frac{1}{3}$

Algebra Find the value of n.

7. $4\frac{7}{8} - 2\frac{3}{4} = n$ _____

8. $5\frac{4}{5} - 3\frac{n}{5} = 2\frac{1}{5}$ _____

9. $n - 2\frac{1}{4} = 1\frac{1}{6}$ _____

10. $5\frac{7}{12} - 3\frac{6}{n} = 2\frac{1}{12}$ _____

11. $9\frac{5}{6} - n = 5\frac{1}{6}$ _____

12. $7\frac{3}{8} - n = 5\frac{1}{8}$ _____

13. $6\frac{3}{4} - 4\frac{n}{4} = 2\frac{1}{2}$ _____

14. $3\frac{6}{8} - 2\frac{5}{n} = 1\frac{1}{8}$ _____

Mixed Review

15. The table shows how much wood Sam used for projects. He forgot to enter some of the numbers. Complete the table.

16. Each week Sam works $3\frac{1}{2}$ hours on Wednesday and $4\frac{1}{4}$ hours on Friday. How many hours does he work each week?

_____

WOOD FOR PROJECTS

Type of Wood	Feet Started With	Feet Used	Feet Left
Oak	$15\frac{1}{2}$	$9\frac{1}{4}$	_____
Pine	$22\frac{5}{8}$	_____	$10\frac{1}{4}$
Maple	_____	$12\frac{3}{4}$	$2\frac{1}{6}$
Cherry	$20\frac{3}{4}$	$5\frac{3}{8}$	_____

Name _____

Subtraction With Renaming

Use fraction bars to find the difference. Write it in simplest form.

1. $3\frac{2}{3} - \frac{1}{6}$

2. $7\frac{1}{4} - 3\frac{3}{8}$

3. $4\frac{3}{10} - 2\frac{4}{5}$

4. $6\frac{2}{3} - 4\frac{5}{6}$

5. $8\frac{1}{2} - 1\frac{5}{6}$

6. $3\frac{1}{8} - 1\frac{1}{2}$

7. $7\frac{1}{10} - 4\frac{2}{5}$

8. $10\frac{3}{8} - 5\frac{3}{4}$

9. $6\frac{11}{12} - 2\frac{2}{3}$ _____

10. $4\frac{1}{5} - 1\frac{7}{10}$ _____

11. $5\frac{5}{8} - 1\frac{3}{4}$ _____

12. $5\frac{1}{2} - 2\frac{7}{12}$ _____

13. $8\frac{1}{6} - 4\frac{5}{12}$ _____

14. $7\frac{1}{4} - 6\frac{7}{12}$ _____

Mixed Review

15. Stacey had 3 cakes for her party. She had $\frac{1}{8}$ of a cake left after the party. How much cake was eaten at her party?

_____

16. Martha spent $2\frac{1}{2}$ hours reading on Saturday. She spent $\frac{3}{4}$ of an hour reading on Sunday. How many hours did she spend reading this weekend?

_____

17. $48{,}000 \div 20 =$ _____

18. $76{,}592 \times 104$

19. $n \times 11 = 77$ _____

20. $\frac{6}{9} - \frac{1}{3} =$ _____

21. $256{,}719 \times 0.3$

22. $\frac{7}{12} - \frac{3}{12} =$ _____

Name _____

Practice with Mixed Numbers

Add or subtract. Write the answer in simplest form. Estimate to check.

1. $3\frac{1}{4}$ + $-2\frac{7}{8}$ = _____

2. $2\frac{1}{2}$ + $-1\frac{3}{5}$ = _____

3. $5\frac{7}{12}$ + $+3\frac{1}{8}$ = _____

4. $5\frac{3}{8}$ + $-1\frac{5}{16}$ = _____

5. $8\frac{9}{10}$ + $-5\frac{1}{5}$ = _____

6. $9\frac{2}{8}$ + $+3\frac{5}{12}$ = _____

7. $6\frac{4}{9}$ + $+10\frac{3}{18}$ = _____

8. $6\frac{2}{3}$ + $-2\frac{1}{12}$ = _____

9. $7\frac{2}{3}$ + $+1\frac{5}{12}$ = _____

10. $8\frac{5}{9}$ + $-3\frac{1}{3}$ = _____

11. $5\frac{5}{12}$ + $+2\frac{1}{6}$ = _____

12. $12\frac{1}{2}$ + $-4\frac{1}{3}$ = _____

Algebra Find the value of *n*.

13. $3\frac{1}{4} + n = 7\frac{1}{8}$ _____

14. $6\frac{5}{6} - n = 2\frac{2}{3}$ _____

15. $9\frac{5}{9} - n = 8\frac{2}{9}$ _____

16. $n + 4\frac{2}{3} = 8\frac{1}{2}$ _____

Mixed Review

17. Write $\frac{7}{8}$ as a decimal. _____

18. $3.78 + n$ if $n = 4.59$ _____

19. $36{,}000 \div 30$ _____

20. $\frac{1}{5} + \frac{4}{5}$ _____

21. Find the greatest common factor of 36 and 60.

_____

22. Find the least common multiple of 8 and 10.

_____

Name _____

Problem Solving Skill

Multistep Problems

1. Emily used wallpaper border to outline her window. She used $6\frac{1}{3}$ yards to outline the door and $1\frac{1}{6}$ yards to outline a shelf. She used $9\frac{1}{2}$ yards of border in all. How much border did she use for the window?

_____

2. On Friday Jake had done a total of 125 push-ups in five days. He did 20 on Monday, 30 on Tuesday, 15 on Wednesday, and 20 on Thursday. How many push-ups did he do on Friday?

_____

3. Dirk spent $3\frac{3}{4}$ hours outside on Saturday. During that time he spent $1\frac{1}{2}$ hours at the park and $1\frac{1}{4}$ hours in a friend's yard. He also rode his bicycle. How much time did he spend riding his bicycle?

_____

4. Terry saved $60 to spend on a party for her mother. She spent $25 for a cake and $12 for party decorations. She spent the rest on a gift. How much did she spend on the gift?

_____

Mixed Review

Solve.

5. Marlinda bought 32 inches of butcher paper for her project. She used $15\frac{1}{4}$ inches. How much butcher paper did she have left?

_____

6. Ingrid planted a garden. In the garden $\frac{1}{2}$ of the rows are tomatoes, $\frac{1}{4}$ of the rows are green beans, and the rest of the rows are lettuce. What fraction of the rows in the garden are lettuce?

_____

Rename each fraction as a mixed number.

7. $\frac{13}{5} =$ _____

8. $\frac{26}{12} =$ _____

9. $\frac{19}{2} =$ _____

10. $\frac{15}{4} =$ _____

Name _____

Multiply a Fraction by a Fraction

Find the product. Write it in simplest form.

1. $\frac{1}{3} \times \frac{1}{5}$ _____

2. $\frac{2}{5} \times \frac{1}{4}$ _____

3. $\frac{2}{3} \times \frac{1}{2}$ _____

4. $\frac{5}{6} \times \frac{2}{3}$ _____

5. $\frac{1}{6} \times \frac{1}{3}$ _____

6. $\frac{2}{3} \times \frac{3}{5}$ _____

7. $\frac{1}{4} \times \frac{2}{7}$ _____

8. $\frac{4}{5} \times \frac{3}{8}$ _____

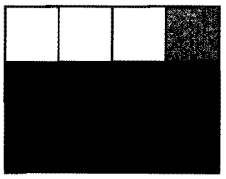
9. $\frac{1}{6} \times \frac{7}{8}$ _____

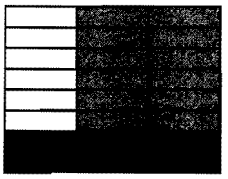
10. $\frac{3}{7} \times \frac{5}{8}$ _____

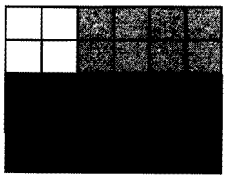
11. $\frac{11}{12} \times \frac{4}{9}$ _____

12. $\frac{7}{9} \times \frac{5}{6}$ _____

Write the number sentence each model represents.

13.  _____

14.  _____

15.  _____

Mixed Review

16. $\begin{array}{r} 348.9 \\ \times\ 7.7 \\ \hline \end{array}$

17. $\begin{array}{r} 534.26 \\ \times\ 3.4 \\ \hline \end{array}$

18. $\begin{array}{r} 58{,}679 \\ -17{,}382 \\ \hline \end{array}$

19. $\begin{array}{r} 7.8747 \\ -\ 0.9912 \\ \hline \end{array}$

20. $6\overline{)432.6}$

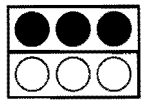
21. $195\overline{)17{,}643.6}$

22. $272\overline{)40.256}$

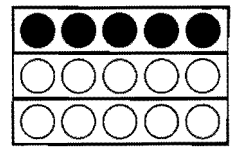
Name _____

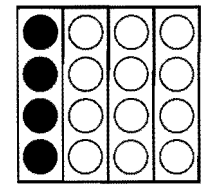
Multiply Fractions and Whole Numbers

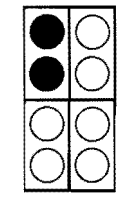
Write the multiplication number sentence each model represents. The first one is done for you.

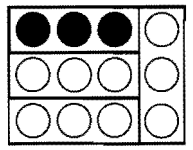
1. 

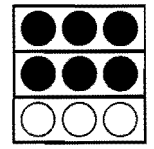
$\frac{1}{2} \times 6 = 3$

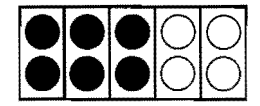
2. 

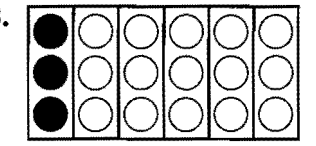
3. 

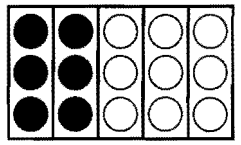
4. 

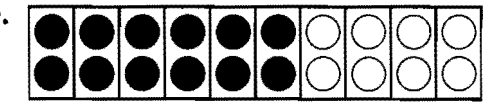
5. 

6. 

7. 

8. 

9. 

10. 

Find the product.

11. $\frac{1}{3} \times 18 =$ _____

12. $\frac{1}{7} \times 21 =$ _____

13. $\frac{1}{4} \times 20 =$ _____

14. $\frac{3}{8} \times 24 =$ _____

15. $\frac{2}{7} \times 14 =$ _____

16. $\frac{5}{8} \times 24 =$ _____

17. $12 \times \frac{3}{4} =$ _____

18. $24 \times \frac{5}{6} =$ _____

19. $18 \times \frac{7}{9} =$ _____

Mixed Review

20. Write $\frac{75}{100}$ in simplest form.

21. Round 65.0798 to the nearest tenth.

22. 6.571 + 3.1

23. 17.012 − 5.1

Name _____

Multiply Fractions and Mixed Numbers

Find the product. Draw fraction squares as needed.

1. $\frac{2}{5} \times 1\frac{1}{3}$

2. $\frac{2}{3} \times 2\frac{1}{4}$

3. $\frac{3}{4} \times 3\frac{2}{3}$

4. $\frac{1}{3} \times 2\frac{1}{4}$

5. $\frac{1}{6} \times 3\frac{1}{2}$

6. $\frac{2}{3} \times 1\frac{1}{2}$

7. $\frac{5}{6} \times 1\frac{2}{3}$

8. $\frac{3}{4} \times 2\frac{4}{5}$

9. $\frac{1}{3} \times 3\frac{2}{5}$

10. $\frac{2}{3} \times 2\frac{2}{3}$

11. $\frac{1}{2} \times 3\frac{5}{6}$

12. $\frac{3}{5} \times 1\frac{3}{4}$

Mixed Review

13. $56{,}346 - 18{,}675$

14. $534{,}127 - 5{,}621$

15. $836{,}142 - 1{,}986$

16. $72{,}839 + 45{,}615$

17. $2{,}586.50 + 1{,}475.61$

18. $3{,}451.04 + 2{,}194.60$

19. $4{,}536.70 + 2{,}549.31$

20. $35.4849 - 32.0792$

Name _____

Multiply with Mixed Numbers

Complete each problem. Show how to simplify before you multiply.

1. $3\frac{1}{2} \times 2\frac{2}{7}$ _____

2. $1\frac{1}{5} \times 3\frac{3}{4}$ _____

3. $1\frac{1}{4} \times 1\frac{1}{3}$ _____

4. $3\frac{1}{3} \times 2\frac{1}{4}$ _____

5. $1\frac{1}{4} \times 1\frac{1}{5}$ _____

6. $1\frac{2}{7} \times 1\frac{1}{6}$ _____

Multiply. Write the answer in simplest form.

7. $\frac{1}{2} \times 25$ _____

8. $1\frac{1}{4} \times \frac{3}{4}$ _____

9. $3\frac{1}{2} \times 5\frac{1}{2}$ _____

10. $\frac{3}{6} \times 12$ _____

11. $3\frac{1}{4} \times \frac{1}{6} \times \frac{2}{3}$ _____

12. $1\frac{1}{5} \times \frac{1}{4} \times 2\frac{1}{2}$ _____

Find the missing digit.

13. $\frac{1}{3} \times \frac{n}{8} = \frac{5}{24}$ _____

14. $3 \times \frac{2}{n} = \frac{6}{7}$ _____

15. $2\frac{n}{6} \times \frac{1}{8} = \frac{13}{48}$ _____

Mixed Review

16. $\begin{array}{r} 326 \\ \times\ 12 \\ \hline \end{array}$

17. $\begin{array}{r} 475 \\ \times\ 38 \\ \hline \end{array}$

18. $\begin{array}{r} 396 \\ \times\ 7 \\ \hline \end{array}$

19. $\begin{array}{r} 491 \\ \times\ 67 \\ \hline \end{array}$

Add $\frac{2}{5}$ to each number.

20. $\frac{3}{5}$ _____

21. $\frac{7}{5}$ _____

22. $\frac{8}{10}$ _____

23. $\frac{9}{2}$ _____

24. $2\frac{1}{5}$ _____

25. 2.4 _____

Name _____

Problem Solving Skill

Sequence and Prioritize Information

Sequence and prioritize information to solve.

1. Julie took $100.00 to the store. She spent $15.00 on fruit, 3 times that much on meat, and $24.45 less on vegetables than she spent on meat. How much change did Julie have?

_____

2. Mrs. Brown's Girl Scout troop had a car wash to earn some funds. They saved $\frac{1}{6}$ of the money. They used $\frac{1}{2}$ of the remaining money to go horseback riding. They then had $100.00 left. How much did they initially make washing cars?

_____

3. The school's track team ran the 220 relay in 7 minutes 46 seconds at their first track meet. The next meet, their time was 42 seconds shorter. At the next, their improvement was twice as great. What was their total running time at the last meet?

_____

4. Sam's birthday is 186 days after Jim's birthday. Susan's is 24 days after Jim's. Sam was born on September 6th. What day was Susan born on if it wasn't a leap year?

_____

Mixed Review

5. $\begin{array}{r} 2.35 \\ \times \quad 7 \\ \hline \end{array}$

6. $\begin{array}{r} 8.64 \\ \times \quad 3 \\ \hline \end{array}$

7. $\begin{array}{r} 4.05 \\ \times \quad 6 \\ \hline \end{array}$

8. $\begin{array}{r} 6.42 \\ \times \quad 8 \\ \hline \end{array}$

9. $\begin{array}{r} 6.34 \\ -0.09 \\ \hline \end{array}$

10. $\begin{array}{r} 8.36 \\ +2.95 \\ \hline \end{array}$

11. $\begin{array}{r} 1.07 \\ -0.09 \\ \hline \end{array}$

12. $\begin{array}{r} 5.9 \\ -0.16 \\ \hline \end{array}$

Write the least common multiple (LCM).

13. 6 and 12 _____

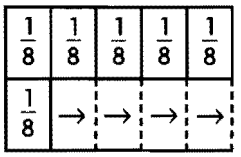
14. 7 and 20 _____

15. 4 and 19 _____

Name _____

Explore Division of Fractions

Write a number sentence for each model.

1. 

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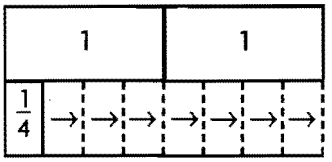
2. 

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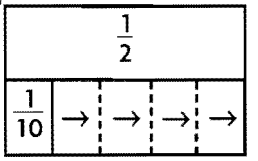
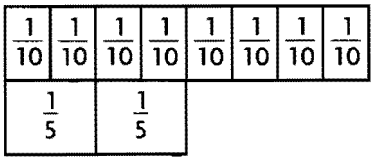
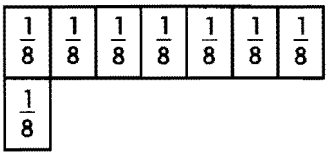
3. 

_____

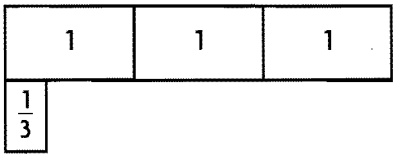
Use fraction bars to find the quotient.

4. 

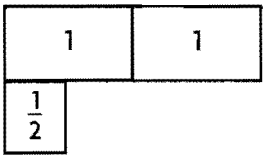
$\frac{8}{10} \div \frac{2}{5} =$ _____

5. 

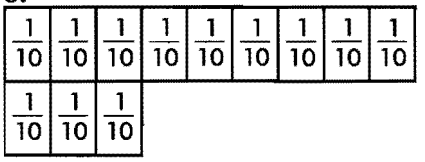
$\frac{7}{8} \div \frac{1}{8} =$ _____

6. 

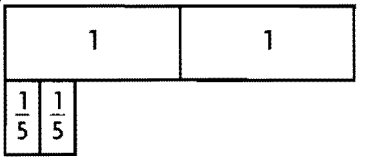
$3 \div \frac{1}{3} =$ _____

7. 

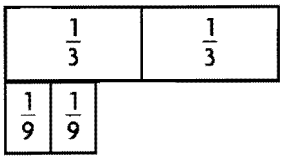
$2 \div \frac{1}{2} =$ _____

8. 

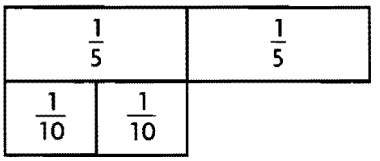
$\frac{9}{10} \div \frac{3}{10} =$ _____

9. 

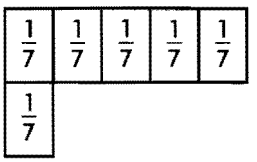
$2 \div \frac{2}{5} =$ _____

10. 

$\frac{2}{3} \div \frac{2}{9} =$ _____

11. 

$\frac{2}{5} \div \frac{2}{10} =$ _____

12. 

$\frac{5}{7} \div \frac{1}{7} =$ _____

Mixed Review

13. Write two fractions equivalent to $\frac{5}{8}$.

_____

14. $\frac{3}{8} + \frac{1}{4}$

_____

15. $5\frac{3}{4} - 1\frac{2}{3}$

_____

Name _____

Reciprocals

Are the two numbers reciprocals? Write *yes* or *no*.

1. $3\frac{1}{3}$ and $\frac{3}{10}$ _____
2. $\frac{1}{2}$ and $\frac{1}{2}$ _____
3. $\frac{3}{4}$ and 4 _____
4. 12 and $\frac{1}{12}$ _____

Write the reciprocal of each number.

5. $\frac{9}{2}$ _____
6. 15 _____
7. $2\frac{3}{7}$ _____
8. $\frac{1}{10}$ _____
9. $\frac{3}{5}$ _____
10. $2\frac{1}{5}$ _____
11. 4 _____
12. $\frac{6}{7}$ _____
13. $\frac{1}{9}$ _____
14. $\frac{15}{4}$ _____

Algebra Find the value of *n*.

15. $\frac{2}{n} \times \frac{5}{2} = 1$ _____
16. $3 \times \frac{n}{3} = 1$ _____
17. $1\frac{1}{2} \times \frac{n}{3} = 1$ _____
18. $n \times \frac{1}{9} = 1$ _____

Multiply. Use the Associative and Commutative Properties of Multiplication to help you.

19. $\frac{4}{7} \times \frac{3}{8} \times \frac{7}{4}$ _____
20. $5 \times \frac{2}{3} \times \frac{1}{5} \times 12$ _____
21. $\frac{3}{7} \times \frac{1}{8} \times 12 \times \frac{7}{3}$ _____

Mixed Review

Find the sum or difference. Write it in simplest form.

22. $\frac{7}{9} - \frac{5}{9}$ _____
23. $\frac{3}{5} + \frac{1}{6}$ _____
24. $1\frac{3}{8} + 2\frac{5}{8}$ _____
25. $5\frac{9}{10} - 3\frac{1}{3}$ _____

Divide.

26. $0.3\overline{)72.417}$
27. $28\overline{)4{,}319}$
28. $2.71\overline{)1.7615}$
29. $4{,}611\overline{)7{,}715}$

Name _____

Divide Whole Numbers by Fractions

Use fraction bars, patterns, or reciprocals to divide.

1. $3 \div \frac{1}{2}$ _____
2. $3 \div \frac{3}{8}$ _____
3. $2 \div \frac{4}{10}$ _____
4. $2 \div \frac{1}{4}$ _____

Divide.

5. $8 \div \frac{4}{5}$ _____
6. $3 \div \frac{2}{3}$ _____
7. $10 \div \frac{5}{7}$ _____
8. $5 \div \frac{3}{8}$ _____
9. $12 \div \frac{2}{5}$ _____
10. $8 \div \frac{1}{9}$ _____
11. $9 \div \frac{3}{7}$ _____
12. $8 \div \frac{5}{6}$ _____

Find the missing number.

13. $7 \div \frac{6}{7} =$ _____
14. $\blacksquare \div \frac{3}{4} = 6$ _____
15. $3 \div \blacksquare = 5\frac{2}{5}$ _____

16. How many three-fourths are in 12? _____

17. How many two-sevenths are in 2? _____

18. How many one-fourths are in 9? _____

Mixed Review

Find the sum or difference. Write it in simplest form.

19. $\frac{1}{9} + \frac{5}{9}$ _____
20. $\frac{3}{4} - \frac{1}{6}$ _____
21. $3\frac{5}{7} - 2\frac{4}{7}$ _____
22. $4\frac{2}{3} + \frac{5}{9}$ _____

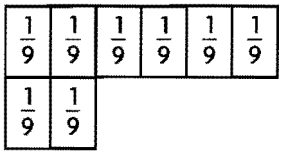
Write each fraction as a decimal.

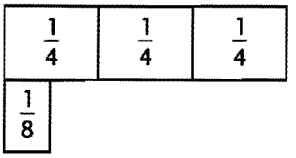
23. $\frac{7}{50}$ _____
24. $\frac{19}{25}$ _____
25. $\frac{49}{125}$ _____
26. $\frac{390}{400}$ _____

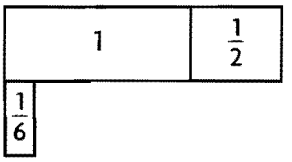
Name _____

Divide Fractions

Write a division sentence for each model.

1. 

2. 

3. 

_____ _____ _____

Use reciprocals to write a multiplication problem for each division problem.

4. $\frac{5}{8} \div \frac{1}{4}$ _____

5. $\frac{7}{9} \div \frac{1}{9}$ _____

6. $\frac{7}{10} \div \frac{1}{5}$ _____

7. $\frac{4}{5} \div 2$ _____

Divide. Write the answer in simplest form.

8. $\frac{4}{5} \div \frac{8}{15}$ _____

9. $\frac{7}{10} \div \frac{1}{2}$ _____

10. $\frac{5}{6} \div \frac{1}{2}$ _____

11. $\frac{6}{15} \div \frac{1}{5}$ _____

12. $\frac{1}{6} \div \frac{2}{3}$ _____

13. $\frac{7}{9} \div \frac{2}{3}$ _____

14. $\frac{9}{10} \div \frac{2}{5}$ _____

15. $\frac{9}{20} \div \frac{3}{4}$ _____

16. $\frac{5}{8} \div \frac{5}{16}$ _____

17. $\frac{5}{6} \div \frac{2}{3}$ _____

18. $\frac{12}{21} \div \frac{4}{7}$ _____

19. $\frac{5}{8} \div \frac{3}{4}$ _____

Mixed Review

Write the common factors for each pair of numbers.

20. 30, 40 _____

21. 18, 28 _____

22. 12, 42 _____

23. 15, 30 _____

Write the greatest common factor for each pair of numbers.

24. 9, 18 _____

25. 22, 24 _____

26. 25, 30 _____

27. 14, 49 _____

Name _____

Problem Solving Strategy

Solve a Simpler Problem

Use a simpler problem to solve.

The Robinsons drove for 4,000 miles during their vacation. This was $\frac{4}{5}$ the distance the Jones family drove during their vacation. The Edwards family did not drive, but flew 6,000 miles to their vacation spot. The Bowie family traveled $\frac{1}{2}$ of the distance of the Edwards family.

1. What equation can you write to find n if n equals the number of miles the Jones family drove?

_____

2. Look at Problem 1. What is a simpler equation you could write? How many miles did the Jones family drive?

_____

3. How many miles did the Bowie family drive? Write a simpler problem first.

_____

_____

_____

4. How many more miles did the Robinson family drive than the Bowie family?

_____

Mixed Review

5. John started exercising at 4:30 P.M. and ended at 6:15 P.M. How long did he spend exercising?

_____

6. Solve.

$3{,}000 \div \frac{3}{4}$

_____

7. Solve.

$34{,}532 - 21{,}412$

_____

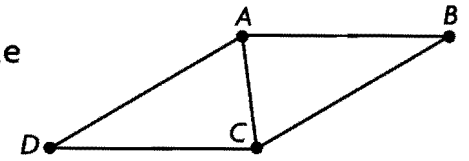
8. Mary wants to put a border around her picture. The picture is 6 inches wide and 5 inches high. How much border does she need to go around the picture?

_____

Name _____

Lines and Angles

For 1–5, use the figure at the right. Name an example of each term.



1. Angle

_____

2. Acute Angle

_____

3. Obtuse Angle

_____

4. Point

_____

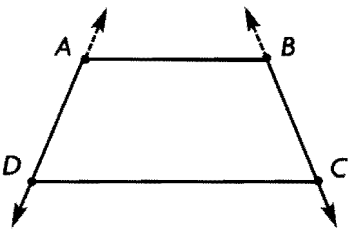
5. Line Segment

_____

Draw and label a figure for each.

6. $\overline{AB}$ 7. Point C 8. $\overrightarrow{BG}$ 9. Midpoint B on $\overline{AC}$

For 10–12, use the figure at the right.



10. Name a line segment parallel to $\overline{AB}$.

_____

11. Name a line segment that intersects $\overline{DA}$.

_____

12. Name two line segments that are not parallel.

_____

Mixed Review

13. Solve for n.

$\frac{600}{n} = 20$

_____

14. What is $\frac{1}{3}$ of 270?

_____

Name _____

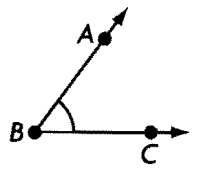
Measure and Draw Angles

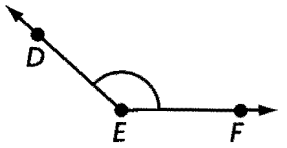
Vocabulary

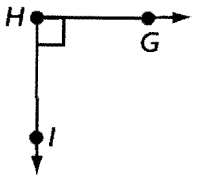
1. The unit used to measure an angle is called a _____.

2. A _____ is a tool for measuring an angle.

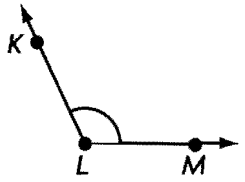
Use a protractor to measure and classify each angle.

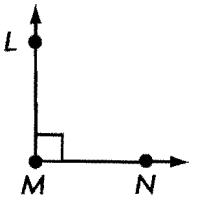
3. 

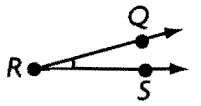
4. 

5. 

_____ _____ _____

6. 

7. 

8. 

_____ _____ _____

Use a protractor to draw each angle. Then write *acute*, *right*, or *obtuse* for each angle.

9. 35° _____

10. 165° _____

11. 85° _____

12. 90° _____

Mixed Review

Solve.

13. $55\overline{)555{,}555}$ _____

14. 2^8 _____

15. 3^5 _____

16. $3\overline{)4{,}527}$ _____

17. $\begin{array}{r} 325 \\ \times\ 12 \\ \hline \end{array}$

18. $\begin{array}{r} 673 \\ \times\ 25 \\ \hline \end{array}$

19. $\begin{array}{r} 518 \\ \times\ 42 \\ \hline \end{array}$

20. $\begin{array}{r} 236 \\ \times\ 18 \\ \hline \end{array}$

21. $\begin{array}{r} 639 \\ \times\ 48 \\ \hline \end{array}$

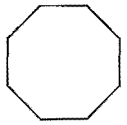
Name _____

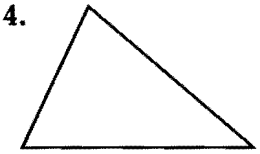
Angles and Polygons

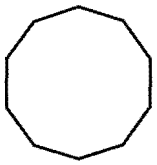
1. A _____ is a closed plane figure formed by three or more line segments.

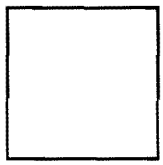
2. If all the sides have equal lengths and all the angles have equal measures, the figure is a _____.

Name each polygon and tell if it is *regular* or *not regular*.

3. 

4. 

5. 

6. 

_____ _____ _____ _____

_____ _____ _____ _____

Use dot paper to draw an example of each.

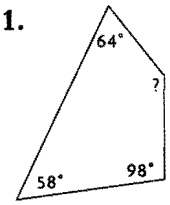
7. regular hexagon

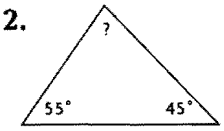
8. regular quadrilateral

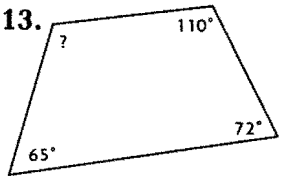
9. octagon that is not regular

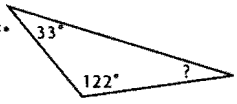
10. regular triangle

Find the unknown angle measure.

11. 

12. 

13. 

14. 

_____ _____ _____ _____

Find a pattern. Then write a rule. Use your rule to draw the next figure in the pattern.

15. Δ ΔΔΔ ΔΔ ΔΔΔΔ ΔΔΔ

16. 

_____ _____

Mixed Review

17. $\begin{array}{r} 7{,}777 \\ \times \quad 77 \\ \hline \end{array}$

18. What is the square root of 256?

19. $12\overline{)82{,}432}$

20. What is 4^4?

_____ _____ _____ _____

Name _____

Circles

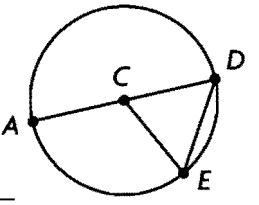
Vocabulary

Write the letter of the best answer from Column 2.

Column 1		Column 2
1. chord	_____	a. a tool for constructing circles
2. diameter	_____	b. a line segment with one endpoint at the center of a circle and the other endpoint on the circle
3. circle	_____	c. a line segment with its endpoints on the circle
4. radius	_____	d. a closed plane figure with all points on the figure the same distance from the center point
5. compass	_____	e. a line segment that passes through the center of the circle and has its endpoints on the circle

---

For 6–7, use circle C.



6. If $\overline{AC}$ is 6 in. long, how long is $\overline{CE}$?

_____

7. If $\overline{AC}$ is 6 in. long, how long is $\overline{AD}$?

_____

Complete 8–10. Then use a compass to draw each circle. Draw and label the measurements.

8. radius = _____
   diameter = 5 cm

9. radius = 4 cm
   diameter = _____

10. radius = _____
    diameter = 6 cm

Mixed Review

11. $\begin{array}{r} 436 \\ \times\ 85 \\ \hline \end{array}$

12. $26\overline{)2{,}704}$

13. 5^2

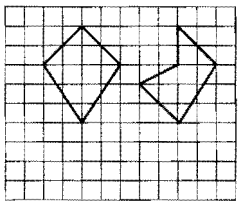
14. 2^5

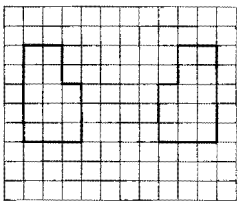
_____ _____ _____ _____

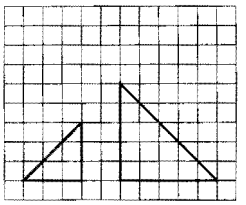
Name _____

Congruent and Similar Figures

Write whether the figures appear to be *similar, congruent, both,* or *neither.*

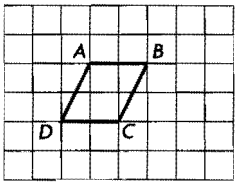
1. 

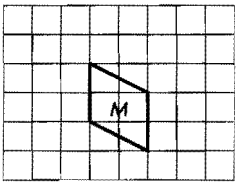
2. 

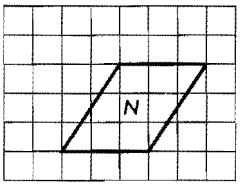
3. 

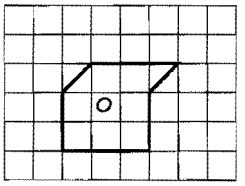
_____ _____ _____

For 4–6, use the figures below.









4. Write the letter of the figure that appears to be neither congruent nor similar to quadrilateral *ABCD*.

_____

5. Write the letter of the figure that appears to be similar but not congruent to quadrilateral *ABCD*.

_____

6. Write the letter of the figure that appears to be congruent to quadrilateral *ABCD*.

_____

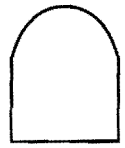
Mixed Review

7. 6.97 + 3.1	8. 8.43 − 7.96	9. 5.02 + 6.09
10. 4.85 − 1.94	11. 5.93 − 3.59	12. 7.53 + 3.08

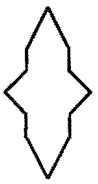
Name _____

Symmetric Figures

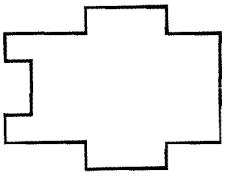
Draw the lines of symmetry for each figure. Tell whether each figure has rotational symmetry. Write *yes* or *no*.

1. 

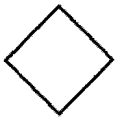
_____

2. 

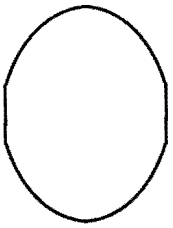
_____

3. 

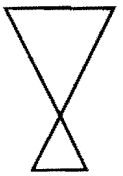
_____

4. 

_____

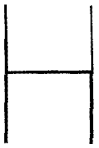
5. 

_____

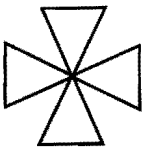
6. 

_____

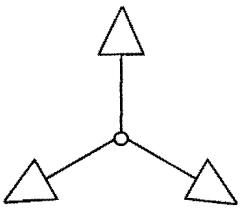
Each figure has rotational symmetry. Tell the fraction and the angle measure of each turn.

7. 

_____

8. 

_____

9. 

_____

Mixed Review

10. Find the next number in the pattern: 1, 3, 6, 10, 15, . . .

_____

11. Find the change from a $20 bill for purchases totaling $17.21.

_____

12. What is $\frac{2}{3}$ of 90?

_____

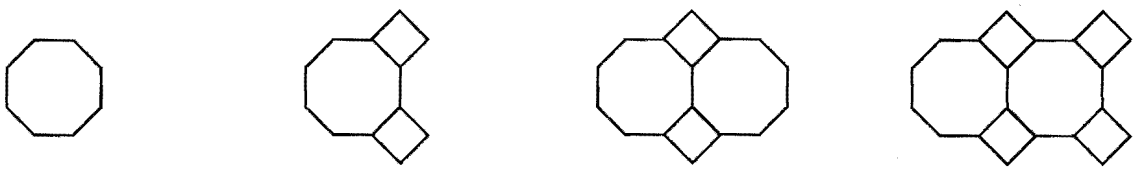
13. Dave has saved $65.50 for a radio that costs $74.98 including tax. How much more does he need to save?

_____

Name _____

Problem Solving Strategy: Find a Pattern

Find a pattern to solve. Describe the pattern.



Step 1 **Step 2** **Step 3** **Step 4**

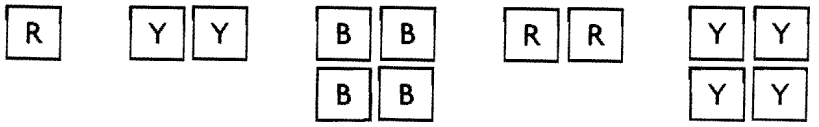
1. What shape or shapes would be added at Step 6?

_____

2. What shape or shapes would be added at Step 9?

_____

Use the pattern to answer Problems 3–6.



1 red, 2 yellow, 4 blue, 2 red, 4 yellow, _____, _____
(Step 6) (Step 7)

3. What color will the blocks in Step 6 be?

_____

4. How many blocks will be in Step 6?

_____

5. What color blocks will be added at Step 7?

_____

6. How many blocks will be added at Step 9?

_____

7. What is the next number in this pattern? 3, 4, 7, 8, 11, . . . ?

_____

8. 
What is the shape of the 16th bead?

_____

Mixed Review

9. $\begin{array}{r} 8{,}535 \\ \times \quad 9 \\ \hline \end{array}$

_____

10. A triangle has two angles measuring 45° and 61°. What is the third angle?

_____

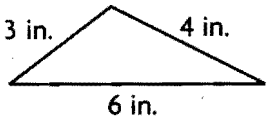
11. $11\overline{)99{,}341}$

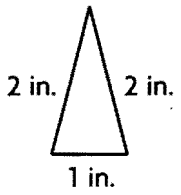
_____

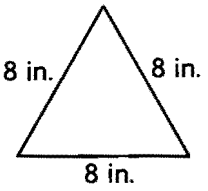
Name _____

Triangles

Classify each triangle. Write *isosceles, scalene,* or *equilateral.*

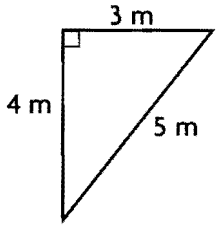
1. 

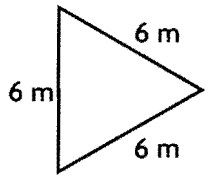
2. 

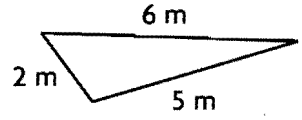
3. 

_____ _____ _____

Classify each triangle. Write *acute, right,* or *obtuse.*

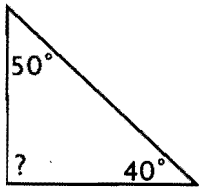
4. 

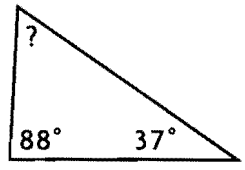
5. 

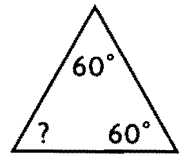
6. 

_____ _____ _____

Find the unknown angle measure.

7. 

8. 

9. 

_____ _____ _____

Use a protractor and ruler to draw triangle *ABC* according to the given measurements. Classify the triangle by its sides and by its angles. Then find the measure of the third angle.

10. $\angle A = 65°$, $\angle C = 65°$, $\overline{AC} = 4$ in.

11. $\angle C = 50°$, $\angle B = 20°$, $\overline{CB} = 2.5$ in.

_____ _____

Mixed Review

Add or subtract. Write the answer in simplest form.

12. $\begin{array}{r} \frac{1}{2} \\ +\frac{3}{4} \\ \hline \end{array}$

13. $\begin{array}{r} \frac{3}{4} \\ -\frac{1}{8} \\ \hline \end{array}$

14. $\begin{array}{r} 1\frac{1}{2} \\ +\frac{3}{8} \\ \hline \end{array}$

15. $\begin{array}{r} 3\frac{1}{6} \\ -\frac{5}{6} \\ \hline \end{array}$

16. $\begin{array}{r} 2\frac{1}{8} \\ +\frac{5}{6} \\ \hline \end{array}$

17. $\begin{array}{r} \frac{3}{10} \\ +\frac{5}{8} \\ \hline \end{array}$

Name _____

Quadrilaterals

Vocabulary

Write the correct letter from Column 2.

Column 1	Column 2
_____ 1. has 4 congruent sides and 2 pairs of congruent angles	a. quadrilateral
_____ 2. has 2 pairs of congruent and parallel sides	b. trapezoid
_____ 3. has 4 sides of any length and 4 angles of any size	c. parallelogram
_____ 4. has only 1 pair of parallel sides	d. rhombus

Draw and classify each quadrilateral described.

5. adjacent sides not equal; 2 pairs of congruent sides; 4 right angles

_____

6. opposite sides not parallel; angles not equal

_____

7. a parallelogram with congruent sides

_____

8. equal angles; 4 congruent sides

_____

9. 2 pairs of parallel sides; 2 pairs of equal angles

_____

10. angles not equal; only one pair of parallel sides

_____

Mixed Review

11. 17^3 _____

12. $0.25\overline{)16.84}$ _____

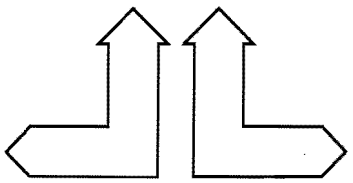
13. $\begin{array}{r} 336.98 \\ \times\ \ 1.8 \\ \hline \end{array}$ _____

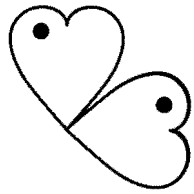
14. $\frac{6}{7} + \frac{7}{5}$ _____

Name _____

Transformations and Tessellations

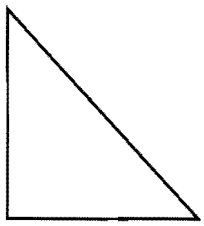
Tell how the first figure was moved. Write *translation, reflection,* or *rotation.* For a rotation, write *clockwise* or *counterclockwise* and *90°* or *180°.*

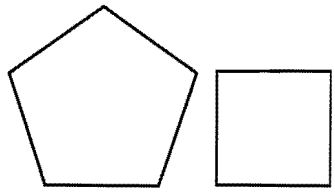
1. 

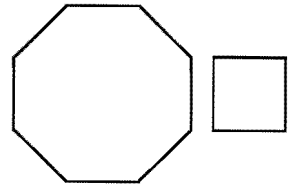
2. 

3. 

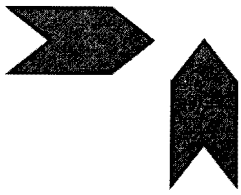
Trace and cut out several of each figure. Tell if the figure or pair of figures will tessellate. Write *yes* or *no.*

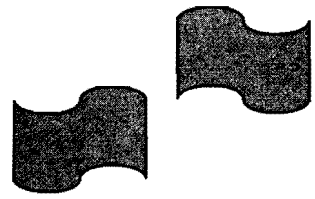
4. 

5. 

6. 

Tell what moves were made to transform each figure into its next position.

7. 

8. 

Mixed Review

Divide.

9. $\frac{2}{3} \div \frac{5}{6}$

10. $\frac{4}{5} \div 8$

11. $15 \div \frac{3}{4}$

12. $\frac{5}{12} \div \frac{1}{2}$

13. $1\frac{4}{5} \div \frac{2}{3}$

14. $2\frac{1}{4} \div 3\frac{3}{8}$

Name _____

Solid Figures

Vocabulary

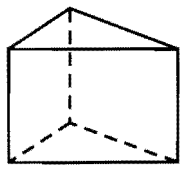
Complete.

1. A _____ is a polyhedron that has two congruent faces called _____.

2. A _____ is a solid figure with one _____ that is a polygon and three or more faces that are triangles with a common vertex.

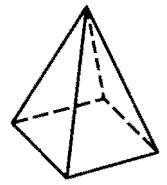
3. A _____ is a solid figure with faces that are polygons.

Classify the solid figure. Then, write the number of faces, vertices, and edges.

4. 

_____

_____

5. 

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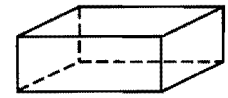
6. 

_____

_____

Draw and classify each figure described.

7. I have 1 flat circular base. I have 1 curved surface.

_____

8. I have a base with 8 equal sides. My faces are 8 triangles.

_____

Mixed Review

9. Write 0.125 as a fraction in simplest form.

_____

10. 0.393×3.93

_____

11. Write $\frac{80}{100}$ in simplest form.

_____

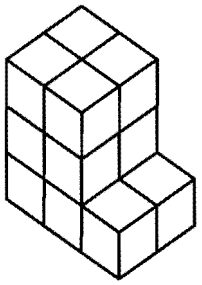
12. $\$290{,}460.81 + 6{,}387.24$

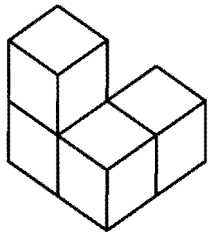
_____

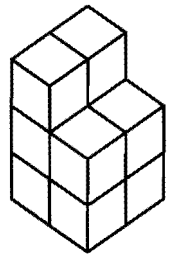
Name _____

Draw Solid Figures from Different Views

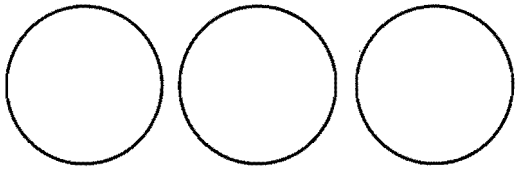
Use grid paper to draw each figure from the top, the side, and the front.

1. 

2. 

3. 

Identify the solid figure that has the given views.

4. 

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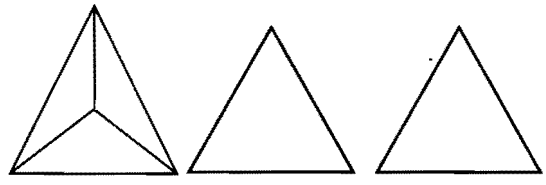
5. 

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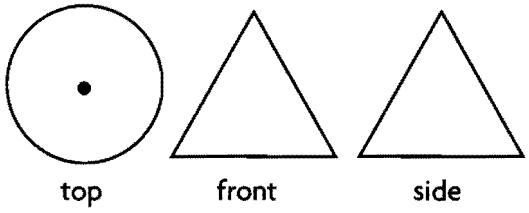
6. 

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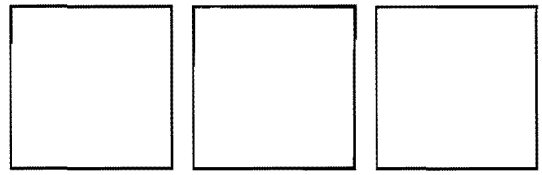
7. 

_____

Mixed Review

8. $\begin{array}{r} 9.78 \\ \times\ 21 \\ \hline \end{array}$

_____

9. Write three fractions equivalent to $\frac{3}{8}$.

_____

10. 6^5

_____

11. $\begin{array}{r} 316 \\ -\ 279 \\ \hline \end{array}$

_____

12. Solve for x.
$4 + x = 10$

_____

13. 7^3

_____

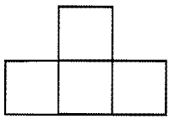
Name _____

Problem Solving Strategy: Make a Model

Make a model to solve.

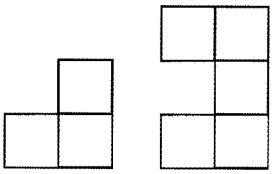
1. How many cubes are needed to make the solid figure that has the front, side, and top views shown?

_____



2. If you add another layer that is the same as the existing bottom layer, how many cubes are needed to build the figure?

_____



3. Abby, Bob, Carmen, David, and Ethan are sitting at a round table. Carmen is sitting between Abby and Ethan. Abby is sitting next to David. Who is sitting on either side of Bob?

A Abby and Carmen
B Carmen and David
C David and Abby
D David and Ethan

4. Suppose Abby, Bob, Carmen, David, and Ethan arrange their chairs in a line. If Bob is between Abby and David, and Ethan is on one end and next to David, who is on the other end?

F Abby
G Bob
H Carmen
J David

Solve.

5. Gina is 2 years older than Brian. Tasha is 3 years younger than Brian. Gina is 13 years old. How old is Tasha?

_____

6. Robin, Ross, and Renee each play a sport. The sports are volleyball, tennis, and track. Ross does not play tennis, and Robin's sport does not use a net. What is Renee's sport?

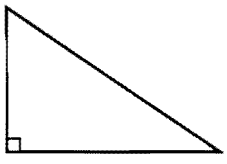
_____

Mixed Review

Classify each triangle. Write *acute*, *right*, or *obtuse*.

7. 

_____

8. 

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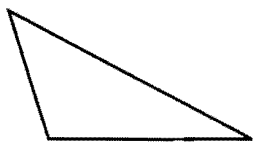
9. 

_____

Name _____

Understand Integers

Write an integer to represent each situation.

1. 15 steps behind _____
2. 10 days ahead of schedule _____
3. a gain of 35 yards _____
4. 14 days after school started _____
5. 20 minutes until arrival time _____
6. a $75.00 withdrawal from the bank _____

Write the opposite of each integer.

7. $^{-}54$ _____
8. $^{-}36$ _____
9. $^{+}3$ _____
10. $^{+}14$ _____
11. $^{-}2$ _____
12. $^{+}289$ _____
13. $^{+}3{,}540$ _____
14. $^{-}2{,}560$ _____

Name each integer's absolute value.

15. $|^{+}36|$ _____
16. $|^{-}230|$ _____
17. $|^{-}1{,}003|$ _____
18. $|^{+}478|$ _____
19. $|^{-}29|$ _____
20. $|^{+}3{,}660|$ _____
21. $|^{+}496|$ _____
22. $|^{-}2|$ _____

Mixed Review

23. Identify the addition property shown. $67 + 4 = 4 + 67$ _____

24. Find n and identify the multiplication property shown. $134 \times n = 0$ _____

Solve for n.

25. $76 \times 8{,}954 = n$ _____

26. $3.66 \times 0.56 = n$ _____

27. $34 \times n = 306$ _____

28. $96 \div n = 8$ _____

Name _____

Compare and Order Integers

Compare. Write <, >, or = in each ◯.

1. $^{-}17$ ◯ $^{-}16$ 2. $^{-}10$ ◯ $^{+}3$ 3. $^{-}5$ ◯ $^{-}7$ 4. $^{+}3$ ◯ $^{-}5$

Draw a number line to order each set of integers from greatest to least.

5. $^{+}3, ^{-}4, ^{-}1, 0$

_____

6. $^{+}4, ^{-}2, ^{+}5, ^{-}1$

_____

7. $^{+}10, ^{+}4, ^{-}9, ^{+}2$

_____

8. $^{-}7, ^{+}2, ^{-}6, ^{+}6$

_____

Algebra Name the integer that is 1 less.

9. $^{-}5$	10. $^{+}10$	11. $^{-}13$	12. $^{+}6$	13. $^{-}7$
_____	_____	_____	_____	_____

Algebra Name the integer that is 1 more.

14. 0	15. $^{-}9$	16. $^{+}8$	17. $^{-}5$	18. $^{-}1$
_____	_____	_____	_____	_____

Mixed Review

Order the fractions from least to greatest.

19. $\frac{1}{2}, \frac{1}{5}, \frac{3}{4}$ _____

20. $\frac{5}{6}, \frac{1}{3}, \frac{3}{8}$ _____

21. $1\frac{3}{4}, 1\frac{3}{6}, 1\frac{3}{5}$ _____

22. $1\frac{2}{5}, 2\frac{1}{4}, 1\frac{2}{3}$ _____

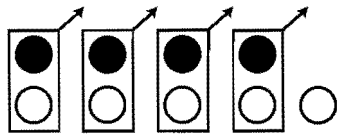
Write the sum or difference.

23. 284.03	24. 137.7	25. 457.6	26. 637.09
$-$ 192.91	$+$ 23.62	$-$ 18.78	$-$ 138.17

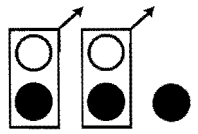
Name _____

Addition and Subtraction of Integers

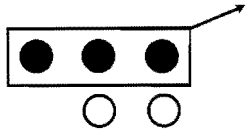
Complete the number sentence.

1. 

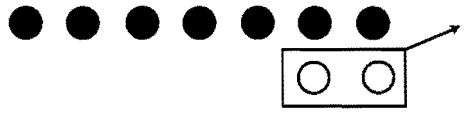
$^{-}4 + {}^{+}5 =$ _____

2. 

$^{+}2 + {}^{-}3 =$ _____

3. 

$^{-}1 - {}^{-}3 =$ _____

4. 

$^{-}5 - {}^{+}2 =$ _____

Find the sum or difference.

5. $^{+}7 - {}^{-}3$ _____

6. $^{-}6 + {}^{-}4$ _____

7. $^{+}10 + {}^{-}3$ _____

8. $^{-}4 - {}^{-}3$ _____

9. $^{-}7 + {}^{+}2$ _____

10. $^{-}3 - {}^{-}2$ _____

11. $^{+}8 + {}^{-}8$ _____

12. $^{-}6 - 0$ _____

13. $^{-}6 - {}^{+}8$ _____

14. $^{-}3 + {}^{+}2 + {}^{-}5$ _____

15. $^{-}4 + {}^{-}3 + {}^{-}5$ _____

16. $^{+}7 + {}^{-}3 - {}^{-}3$ _____

Compare. Write $<$, $>$, or $=$ in each ◯.

17. $^{+}9 + {}^{-}3$ ◯ $^{-}6$

18. $^{+}3 + {}^{+}2$ ◯ $^{+}1$

19. $^{-}4 + {}^{+}5$ ◯ $^{-}9$

20. $^{-}2 + {}^{-}2$ ◯ $^{-}4$

21. $^{-}7 - {}^{+}3$ ◯ $^{+}4$

22. $^{+}2 - {}^{-}10$ ◯ $^{-}12$

Mixed Review

Round to the nearest hundred.

23. 651 _____

24. 1,524 _____

25. 12,345,542 _____

26. 83,952 _____

Round to the value of the underlined digit.

27. $0.\underline{7}34$ _____

28. $2\underline{1}.638$ _____

29. $5.0\underline{1}3$ _____

30. $62.\underline{8}19$ _____

Name _____

Problem Solving Strategy: Draw a Diagram

Draw a diagram to solve.

1. Sandra opened a checking account with $200.00. She wrote a check for groceries for $95.00 and a check for clothes for $65.00. Later that week she withdrew $85.00. She balanced her checkbook and realized she had overdrawn her account. How much money did she have to take to the bank to cover her overdraft and maintain a minimum of $50.00 in the account?

_____

2. John went scuba diving and dove to a depth of 30 ft. After a few minutes he realized he had ascended 5 ft. Then he noticed the coral at the bottom so he decided to descend 12 ft. Finally, he ascended 22 ft to feed the fish before returning to the surface. At what depth did he feed the fish?

_____

3. Scott spent 8 hours driving to college. If his average speed was 55 mph, how many miles did Scott drive?

_____

4. There are 12 times as many players as coaches. There are 9 coaches. How many players are there?

_____

5. Mr. Downing went on a 100–day archaeological expedition. He traveled 15 of the days. What fraction of the days did he not travel?

_____

6. There were 63 people in a hotel. Then 7 checked out, and 3 times that number checked in. How many people are in the hotel now?

_____

Mixed Review

Write as a fraction in simplest form.

7. 0.05 _____ 8. 0.29 _____ 9. 0.98 _____

10. 0.14 _____ 11. 0.75 _____ 12. 0.33 _____

Name _____

Graph Relationships

Write the ordered pairs. Then graph them.

1.

Input, x	10	15	20	25
Output, y	5	10	15	20

_____

2.

Input, x	6	7	8	9
Output, y	11	12	13	14

_____

3.

Input, x	10	9	8	7
Output, y	7	6	5	4

_____

4.

Input, x	2	3	4	5
Output, y	6	9	12	15

_____

5.

Length of Square's Side, x	4	5	6	7
Perimeter, y	16	20	24	28

_____

6.

Number of Quarters, x	1	2	3	4
Number of Nickels, y	5	10	15	20

_____

Use Data For 7–8, use the table.

Tickets sold, x	1	2	3	4
Money received, y	\$4	\$8	\$12	\$16

7. Write the ordered pairs. Then graph the ordered pairs.

_____

_____

8. How can you use the graph to find the amount of money 5 tickets cost?

_____

_____

_____

Mixed Review

9. If $x = 22$, what is the value of $(x + 48)$?

10. $\begin{array}{r} 45{,}679{,}231 \\ +\ 12{,}382{,}938 \\ \hline \end{array}$

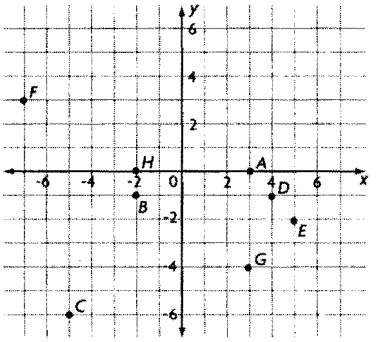
11. Find the mode of the data set: 159, 156, 159, 166, 164, 162

12. Find the mean of the data set in problem 11.

Name _____

Graph Integers on the Coordinate Plane

For 1–8, identify the ordered pair for each point.



1. Point A _____
2. Point B _____
3. Point C _____
4. Point D _____
5. Point E _____
6. Point F _____
7. Point G _____
8. Point H _____

Graph and label the ordered pairs on a coordinate plane.

9. $A\ (0,{}^{+}7)$
10. $B\ ({}^{+}4,0)$
11. $C\ ({}^{+}2,{}^{+}6)$
12. $D\ ({}^{-}3,{}^{+}6)$
13. $E\ ({}^{+}5,{}^{-}3)$
14. $F\ ({}^{-}2,{}^{+}7)$
15. $G\ ({}^{+}1,{}^{+}6)$
16. $H\ ({}^{-}5,{}^{+}6)$
17. $J\ ({}^{+}4,{}^{+}6)$

For 18–23, name the ordered pair that is described.

18. Start at the origin. Move 6 units to the left and 4 units up.

_____

19. Start at the origin. Move 4 units to the right and 4 units down.

_____

20. Start at the origin. Move 0 units to the right and 2 units up.

_____

21. Start at the origin. Move 3 units to the left and 0 units down.

_____

22. Start at the origin. Move 1 unit to the left and 5 units down.

_____

23. Start at the origin. Move 2 units to the right and 3 units up.

_____

Mixed Review

24. 348×25

_____

25. $30.8 - 16.925$

_____

26. $7.000 \div 8$

_____

27. $1\frac{3}{4} + 2\frac{3}{8}$

_____

28. $3\frac{1}{6} - 1\frac{2}{3}$

_____

29. $1.87 + 32.6 + 0.555$

_____

Name _____

Transformations on the Coordinate Plane

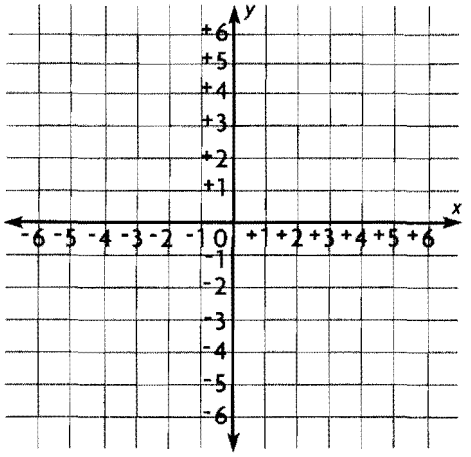
Vocabulary

Complete.

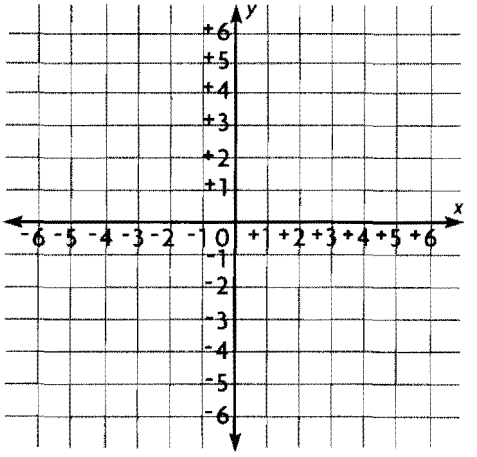
1. When you move a figure to show a translation, reflection, or rotation, it is called a _____.

Graph the triangle with vertices $(^{+}2,^{+}4)$, $(^{+}2,^{+}6)$, and $(^{+}6,^{+}4)$. Then transform the triangle to the new given vertices. Write *translation, reflection,* or *rotation* to describe the move.

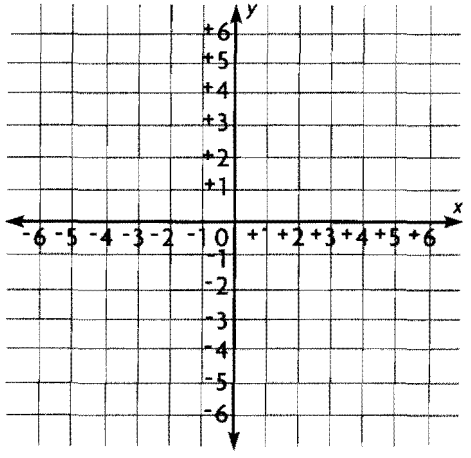
2. $(^{-}2,^{+}4)$, $(^{-}2,^{+}6)$, $(^{-}6,^{+}4)$



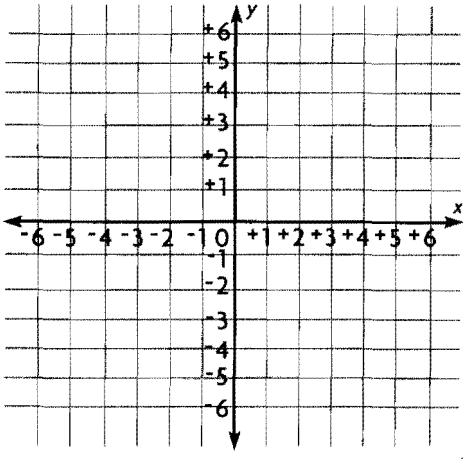
3. $(^{+}2,^{+}4)$, $(^{+}4,^{+}4)$, $(^{+}2,0)$



4. $(^{-}6,^{-}4)$, $(^{-}6,^{-}2)$, $(^{-}2,^{-}4)$



5. $(^{+}2,^{-}4)$, $(^{+}2,^{-}6)$, $(^{+}6,^{-}4)$



Mixed Review

6. $\begin{array}{r} 5.5 \\ \times\ 6.5 \\ \hline \end{array}$ _____

7. $\frac{3}{4} - \frac{15}{20}$ _____

8. $0.5\overline{)0.985}$ _____

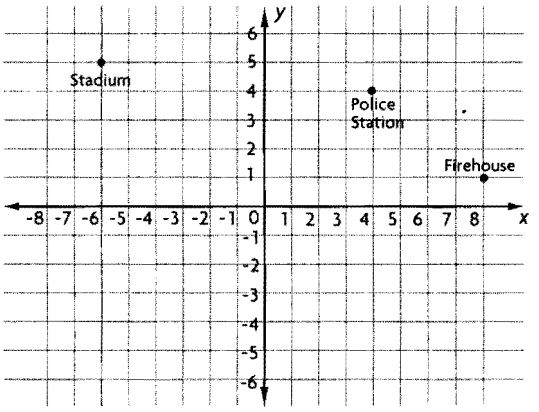
9. $\begin{array}{r} \$18{,}350.66 \\ -\ \ 681.08 \\ \hline \end{array}$ _____

Name _____

Problem Solving Skill: Relevant or Irrelevant Information

For 1–2, use the map. Tell the relevant information and solve.

1. The park and the stadium have the same y-coordinate. The x-coordinate of the park is 2 less than the police station's y-coordinate. The firehouse is 4 units right and 3 units down from the police station. Where is the park?



_____

2. The soccer field was built before the stadium. It is south of the park and east of the stadium. If you go 3 units west of the police station, you will find the soccer field. Where is the soccer field?

_____

Lara skated to the playground, which is 3 blocks north of her house. Then she turned west and skated 4 blocks to her friend's house. Before going home, she stopped at the store, which is 3 blocks south of her friend's house. She then returned home. How many blocks did she skate?

3. Which information is relevant to solving the problem?

   A Lara skated to the playground.

   B Her friend lives west of the playground.

   C The store is 3 blocks south of Lara's friend's house.

   D The playground is north of Lara's house.

4. Which question cannot be answered with the given information?

   F How far is Lara's house from the store?

   G In which direction did Lara travel home from the store?

   H Could Lara have taken a shorter route?

   J How far is the playground from the store?

5. In the number 268,743, how many times greater than the 3 is the 6?

_____

6. Write the next 4 letters in this sequence: A, B, Z, Y, C, D, . . .

_____

Name _____

Customary Length

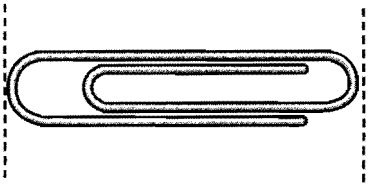
Vocabulary

1. The smaller the unit, the more _____ the measurement will be.

Tell the best unit and tool for measuring each.

2. length of a dollar bill _____.
3. distance from Boston to Buffalo _____.
4. width of a soccer field _____.

Estimate the length in inches. Then measure to the nearest $\frac{1}{8}$ inch.

5. 

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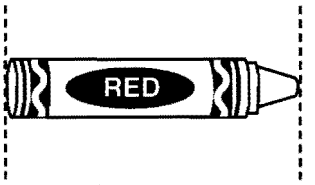
6. 

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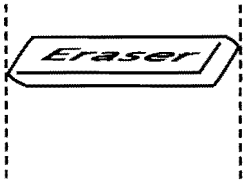
7. 

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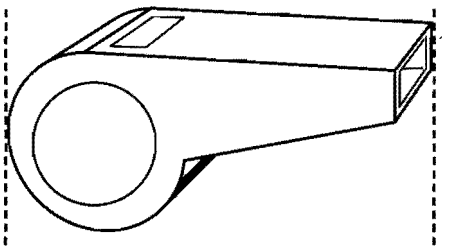
8. 

_____

Tell which measurement is more precise.

9. 178 in. or 12 ft _____
10. 58 yd or 51 ft _____
11. 0.5 mi or 850 yd _____

Mixed Review

12. Karina has an $8\frac{1}{2}$-inch-by-11-inch sheet of paper. She wants to leave a $\frac{3}{4}$-inch margin on all 4 sides. What are the dimensions of the remaining area?

_____

13. Elise measures her hair ribbon. It is $9\frac{2}{3}$ inches long. Mindy's hair ribbon is $9\frac{5}{8}$ inches long. Who has the longer hair ribbon? How much longer?

_____

Name _____

Metric Length

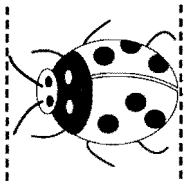
Write the appropriate metric unit for measuring each.

1. the width of your state

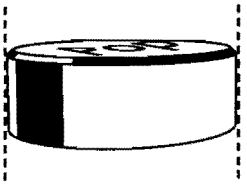
2. the thickness of a penny

3. the length of a fork

Estimate and measure each.

4. 

5. 

6. 

7. 

Find the measurement of each.

8. the length of a train 15 cars long if 1 car is 18 m long

9. the width of window 7 panes wide if 1 pane is 21 cm wide

10. the width of a row of 25 seats in an auditorium if each seat is 0.7 m wide

Mixed Review

11. Write $\frac{6}{9}$ in simplest form.

12. Write $6\frac{1}{8}$ as a decimal.

13. Would you rather buy 6 yards or 17 feet of fabric, each selling at the same price?

14. What is the least common multiple of 8 and 14?

Name _____

Change Linear Units

Change the unit.

1. 65 cm = _____ mm
2. 400 cm = _____ m
3. 60 in. = _____ ft
4. 3 yd = _____ in.
5. 36 ft = _____ yd
6. 1,760 yd = _____ mi

Complete.

7. 7 km 8 m = 6 km ☐ m
8. 3 mi 27 ft = 2 mi ☐ ft
9. 10 ft = ☐ yd 1 ft

Find the sum or difference.

10. 6 ft 5 in. + 3 ft 9 in.
11. 9 yd 7 ft − 6 yd 8 ft
12. 9 m 20 cm − 7 m 30 cm
13. 15 m 4 cm + 6 m 2 cm

Mixed Review

Find the product.

14. 2,345 × 16
15. 1,789 × 25
16. 3,060 × 32

Order from *least* to *greatest*.

17. $2\frac{2}{11}, 1\frac{5}{8}, 2\frac{1}{9}, 1\frac{3}{7}$
18. $\frac{26}{3}, \frac{22}{4}, \frac{16}{5}, \frac{21}{3}, \frac{19}{2}$

19. Karen is counting the change in her drawer. When she gets 6 more nickels, she will have $5.00 in nickels. How many nickels does she have now?

20. The Ryan family traveled 64 miles on Friday and 60.2 miles on Saturday. The Jones family traveled 59.3 miles on Friday and 63.4 miles on Saturday. Which family traveled more miles? How many more?

Name _____

Customary Capacity and Weight

Change the unit.

1. 16 pt = ■ gal _____
2. 10 c = ■ pt _____
3. 4 qt = ■ c _____
4. 1 gal = ■ c _____
5. 32 fl oz = ■ pt _____
6. 3 T = ■ lb _____
7. 16 qt = ■ gal _____
8. 8 c = ■ fl oz _____

Choose the best tool to measure each.

9. amount of water in a bathtub _____
   a. gallon container
   b. measuring cup
   c. odometer
10. amount of coffee in a cup _____
    a. gallon container
    b. yardstick
    c. measuring cup
11. the temperature outside _____
    a. ruler
    b. thermometer
    c. scale
12. a puppy's weight _____
    a. odometer
    b. scale
    c. thermometer

Mixed Review

Find the sum, difference, or product.

13. $2\frac{3}{4} + 1\frac{1}{8}$ _____
14. $3 \times \frac{2}{5}$ _____
15. $\begin{array}{r} 24.06 \\ -\ 15.59 \\ \hline \end{array}$

16. What angles are greater than 90° but less than 180°? _____
17. What are the prime numbers between 5 and 13? _____
18. If you started a bike race at 11:30 A.M. and you finished 2 hours later, what time would it be? _____
19. Write fourteen thousand and six tenths in standard form. _____

Name _____

Metric Capacity and Mass

Change the unit.

1. 1.5 L = ■ metric cups _____

2. 2,000 L = ■ kL _____

3. 5,000 mg = ■ g _____

Choose the best estimate.

4. 

mass of an apple pie is _____

a. 1 mg

b. 1 g

c. 1 kg

5. 

mass of the puppy is _____

a. 2 kg

b. 2 g

c. 2 mg

6. 

the cup holds _____

a. 3 L

b. 3 mL

c. 3 kL

7. 

mass of a paper clip is _____

a. 1 mg

b. 1 kg

c. 1 g

Mixed Review

8. 600 ÷ 0.03 _____

9. 16.48 + 3.2 = *n* _____

10. Write 16,345,107 in word form. _____

11. Write 21.45 as a fraction. _____

12. What is the sum of the angles in a triangle? _____

13. In which place would you write the first digit of the quotient for 2.682 ÷ 4? _____

Name _____

Time and Temperature

Write the time for each.

1. Start: 9:00 A.M.
   Elapsed: _____
   End: 1:50 P.M.

2. Start: 7:27 A.M.
   Elapsed: 4 hr 24 min
   End: _____

3. Start: Dec 1, 10:15 P.M.
   Elapsed: 4 hr 10 min
   End: _____

4. Start: _____
   Elapsed: 16 hr 35 min
   End: March 18, 3:25 A.M.

Add or subtract.

5. 3 hr 25 min
   +6 hr 50 min

6. 4 hr 10 min
   −1 hr 30 min

7. 3 hr 1 min
   +5 hr 19 min

8. 9 hr 5 min
   −2 hr 50 min

Circle the temperature that is the better estimate.

9. ice cream
   0°F or 0°C

10. your body temperature
    98°F or 98°C

11. raking leaves
    15°F or 15°C

Find the change in temperature.

12. 70°F to 45°F
    _____

13. 15°C to $^{-}5$°C
    _____

14. 12°F to 100°F
    _____

15. Emma left for school at 8:05 A.M. She arrived at school at 8:32 A.M. How long did it take her to get to school?
    _____

16. The school day at Westwood Elementary lasts for 6 hr and 40 min. The final bell rings at 3:20 P.M. What time does school begin?
    _____

Mixed Review

Compare. Write <, >, or = in each ◯.

17. $^{-}6 + {}^{+}7 \bigcirc {}^{-}1$

18. $^{+}3 - {}^{-}8 \bigcirc {}^{+}5$

19. $^{-}9 + {}^{-}2 \bigcirc {}^{-}7$

Name _____

Problem Solving Skill: Estimate or Actual Measurement

Decide whether you need an estimate or an actual measurement. Solve.

1. Louise has a spool of multi-colored ribbon 25 feet long. She wants to give three 30-inch pieces to each of 4 friends. Does she have enough ribbon?

_____

2. Marcy left her house at 3 P.M. It took 20 min to get to the mall, about 1 hr to shop, 25 min to get home, and 30 min to get dressed for a party. Was Marcy ready at 5 P.M.?

_____

3. Eli walks 3 kilometers around a track every morning. If each lap is 200 meters, how many laps does he walk each morning?

_____

4. Jonah has a 1-quart bottle of cooking oil. How many batches of pancakes can he make if he uses about 5 ounces of oil per batch?

_____

A baby boy weighed 6 pounds 5 ounces when he was born. In each of the next 4 weeks, he gained 5 ounces, 11 ounces, 8 ounces, and 10 ounces, respectively.

5. Which question about the baby requires an estimate?

   A About how much did the baby weigh after 1 month?

   B Did the baby gain more than 1 pound during any week?

   C During which week did the baby gain the most?

   D How many ounces did the baby gain in 4 weeks?

6. Which expression shows how to find how much the baby gained in pounds during the first 4 weeks?

   F $(5 + 11 + 8 + 10) \div 4$

   G $(5 + 11 + 8 + 10) \div 16$

   H $4 \times (5 + 11 + 8 + 10)$

   J $16 \times (5 + 11 + 8 + 10)$

Mixed Review

Solve.

7. Victor needs 125 tiles to cover his kitchen floor. Each tile costs $0.79. If Victor buys a case of 144 tiles, he will pay only $0.59 per tile. How much will Victor save if he buys a case of tiles?

_____

8. Lena bought 5 quarts of oil for her car. The oil was on sale for $0.89 per quart, and there was a mail-in rebate of $1.50. How much did the 5 quarts of oil cost after the rebate?

_____

Name _____

Estimate Perimeter

For 1–2, use the map of Indiana.

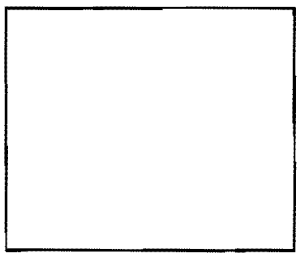
1. Use string and a metric ruler. Estimate the perimeter of the state of Indiana in centimeters.

_____

2. Use the scale. What is an estimated perimeter of Indiana in miles?

_____

Estimate the perimeter of the polygon in centimeters.

3. 

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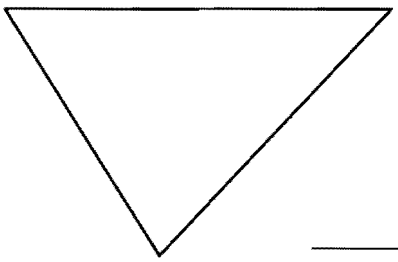
4. 

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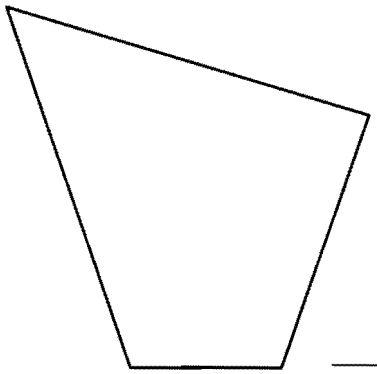
5. 

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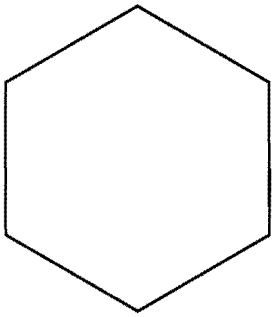
6. 

_____

Mixed Review

Change the unit.

7. 5 kg = _____ g
8. 800 cm = _____ m
9. 2,000 mL = _____ L

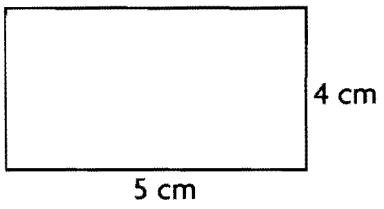
The measures of two angles of a triangle are given. Find the measure of the third angle.

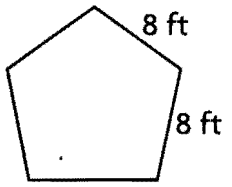
10. 60°, 45° _____
11. 120°, 30° _____
12. 90°, 55° _____
13. 25°, 50° _____

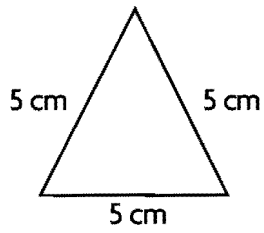
Name _____

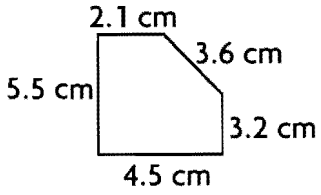
Algebra: Find Perimeter

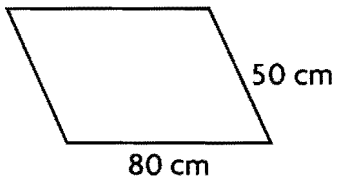
Find the perimeter of each polygon.

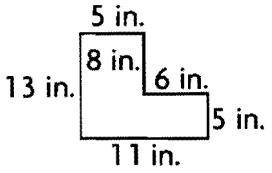
1. 

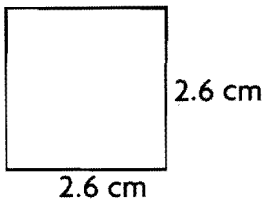
2. 

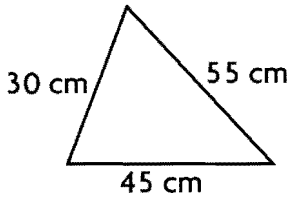
3. 

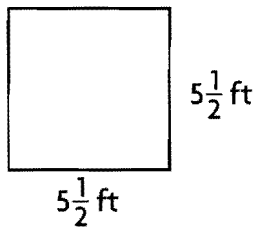
4. 

5. 

6. 

7. 

8. 

9. 

Mixed Review

10. Name the addition property used in this equation. $(9 + 1) + 3 = 9 + (1 + 3)$

11. What number's value is 100,000 less than 1,547,298?

12. Write forty-five ten-thousandths in standard form.

13. $8.9 + 0.92 + 0.095 + 8.4 + 0.9$

14. $6 \times \$1.65$

15. $16\overline{)450}$

Name _____

Problem Solving Skill: Make Generalizations

Make generalizations to solve.

1. The Towers Dormitories at the University of Pittsburgh are three congruent prisms. If a side of Tower A is 229.5 feet high, how high is a side of Tower C?

_____

2. Jake drew a plane figure with three congruent sides. What is the measure of each angle of the figure?

_____

3. A plane figure has 6 congruent sides. The perimeter of the figure is 96 meters. What is the length of each side?

_____

4. The distance between Youngstown and Ashville is the same as the distance between Canton and Youngstown. If it takes 2 hours to drive from Youngstown to Ashville, how long should it take to drive from Youngstown to Canton?

_____

5. Betty is cutting a rectangular cake. It measures 12 inches long by 6 inches wide. If each piece is 3 inches square, how many pieces can she cut?

_____

6. Bart and Brett are identical twins. Brendan and Britt are also identical twins. Can you find the ages of Bart and Brett? Explain.

_____

Mixed Review

7. $90\overline{)63{,}636}$

_____

8. $\frac{31}{32} - \frac{1}{4}$

_____

9. $\begin{array}{r} 63{,}636 \\ \times \quad 96 \\ \hline \end{array}$

_____

10. What is 9^4?

_____

Name _____

Algebra: Circumference

For 1–6 complete the table.

	C	d	$C \div d$
1.	9.42 cm	3 cm	_____
2.	5 in.	_____	3.14
3.	4.4 ft	_____	3.14
4.	_____	7 mi	3.14
5.	12 yd	_____	3.14
6.	_____	8.5 cm	3.14

To the nearest tenth, find the circumference of a circle that has

7. a diameter of 34 in.

_____

8. a radius of 6 ft.

_____

9. a radius of 2 m.

_____

10. a diameter of 100 yd.

_____

Mixed Review

11. What is the perimeter of a square that measures 4.5 ft on one side?

_____

12. Write one hundred thirty-five ten-thousandths in standard form.

_____

13. Find the average of 1.5, 2, 2.5, and 1.

_____

14. Each player on the basketball team is required to have an average of 80 or better. 76, 85, 70, 90, 71, and 82 are the math scores of one basketball player. Find his average. Will he be able to play on the team?

_____

15. $12 \times n = 600$

_____

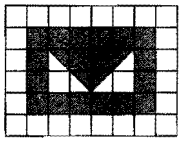
16. $23\overline{)658}$

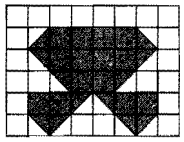
_____

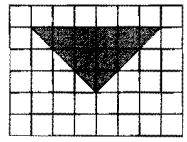
Name _____

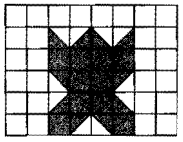
Estimate Area

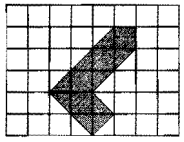
Estimate the area of the shaded figure. Each square on the grid is 1 in^2.

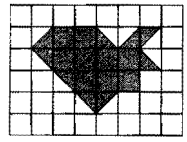
1. 

2. 

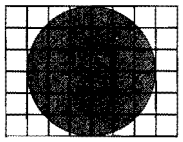
3. 

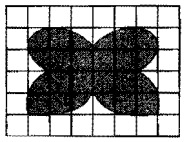
4. 

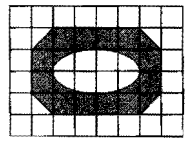
5. 

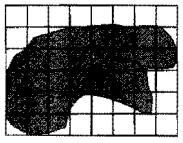
6. 

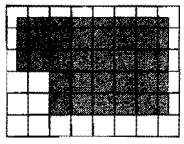
Estimate the area of the shaded figure. Each square on the grid is 1 m^2.

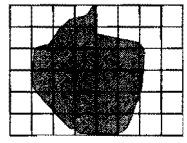
7. 

8. 

9. 

10. 

11. 

12. 

Mixed Review

Find the quotient. Check by multiplying.

13. $3\overline{)1.44}$

14. $8\overline{)14.32}$

15. $4\overline{)0.56}$

Find the sum or difference. Write the answer in simplest form.

16. $\frac{5}{12} + \frac{1}{4}$

17. $\frac{6}{9} + \frac{2}{3}$

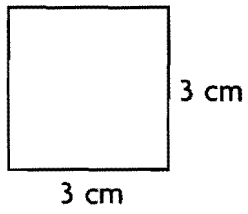
18. $\frac{2}{5} - \frac{3}{10}$

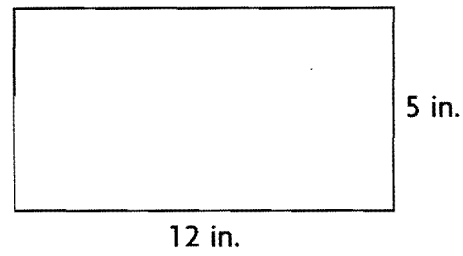
19. $\frac{7}{8} - \frac{3}{16}$

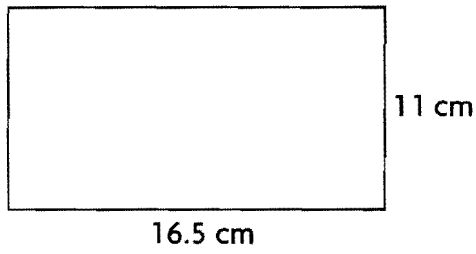
Name _____

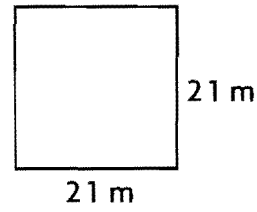
Algebra: Area of Squares and Rectangles

Find the area of each figure.

1. 

2. 

3. 

4. 

Find each missing measurement.

5. $s = 3.2$ yd
   $A =$ ■

6. $s = 5\frac{1}{2}$ in.
   $A =$ ■

7. $s = 60$ cm
   $A =$ ■

8. $l = 9$ m
   $w = 12$ m
   $A =$ ■

9. $l =$ ■
   $w = 3.1$ mi
   $A = 31$ mi^2

10. $l = 4.5$ ft
    $w =$ ■
    $A = 72$ ft^2

Mixed Review

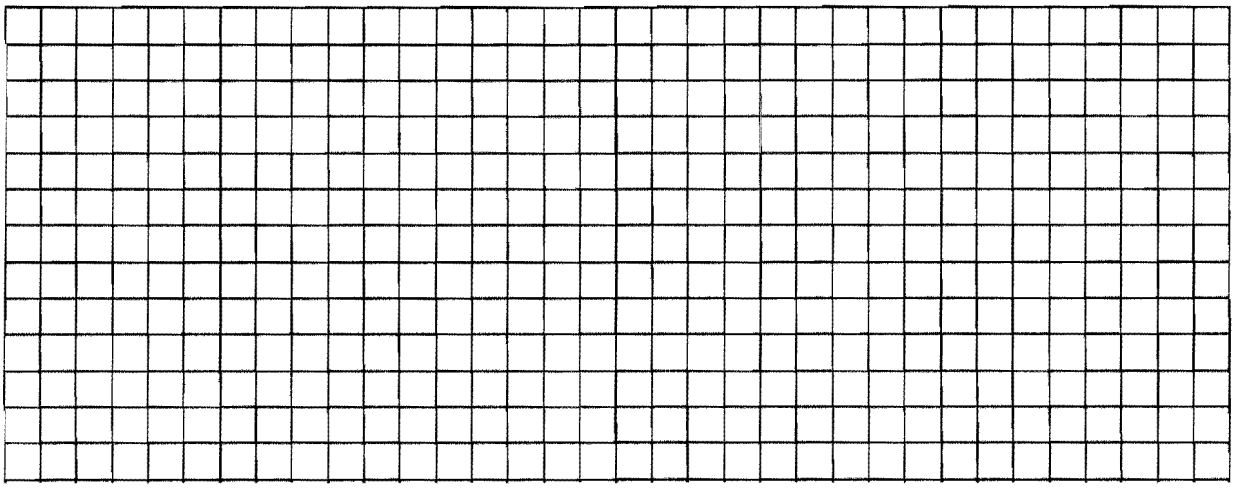
11. $22\overline{)456}$

12. Name the factors of 11. Is it a prime or composite number?

Name _____

Relate Perimeter and Area

Use the grid below to draw rectangles for the given perimeter. Find the length and width of the rectangle with the greatest area. (Use whole numbers only.)



1. 50 cm _____

2. 34 cm _____

3. 12 cm _____

For the given area, find the length and width of the rectangle with the least perimeter. (Use whole numbers only.)

4. 30 cm^2 _____

5. 12 cm^2 _____

6. 21 cm^2 _____

7. 50 cm^2 _____

8. 4 cm^2 _____

9. 48 cm^2 _____

Mixed Review

10. What is the least common multiple of 15 and 10? _____

11. Change $\frac{1}{20}$ to a decimal. _____

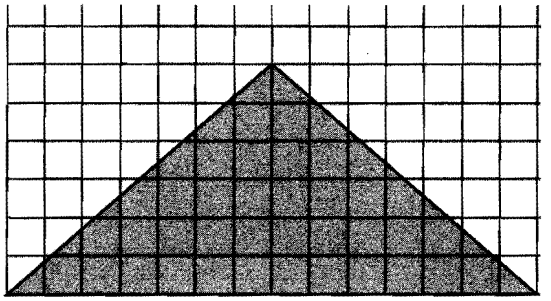
12. $\frac{1}{3} + \frac{2}{5}$ _____

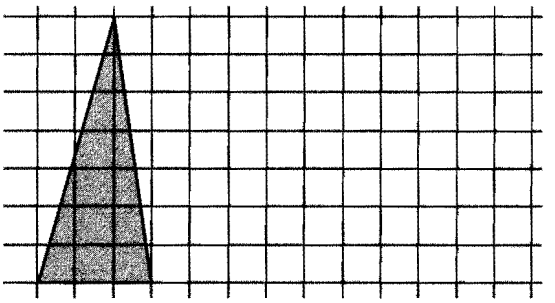
13. Change 42 inches to feet. _____

Name _____

Algebra: Area of Triangles

Find the area of each triangle.

1. 

2. 

Find the area of each triangle.

3. base (b) = 4 cm
   height (h) = 5 cm

4. base (b) = 12 yd
   height (h) = 12 yd

5. base (b) = 3.5 mi
   height (h) = 10 mi

6. base (b) = 10 in.
   height (h) = 4 in.

7. base (b) = 7 ft
   height (h) = 6 ft

8. base (b) = 21 cm
   height (h) = 12 cm

Find the missing measurement for each triangle.

9. base (b) = ■
   height (h) = 50 cm
   Area (A) = 800 cm^2

10. base (b) = 32 ft
    height (h) = ■
    Area (A) = 160 ft^2

11. base (b) = 4 cm
    height (h) = ■
    Area (A) = 18 cm^2

Mixed Review

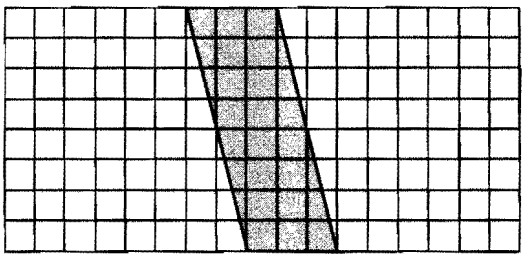
12. What is the circumference of a circle that has a diameter of 8 m?

13. Is 42 a prime or composite number? What are its factors?

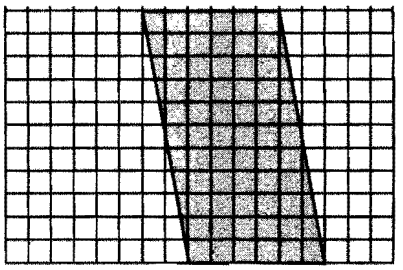
Name _____

Algebra: Area of Parallelograms

Write the base and height of each figure.

1. 

_____

2. 

_____

Find the area of each parallelogram.

3. base (b) = 3 in.
   height (h) = 6 in.

_____

4. base (b) = 7.5 cm
   height (h) = 4 cm

_____

Find the missing measurement for the parallelogram.

5. base (b) = 22.5 cm
   height (h) = 5 cm
   Area (A) = ■

_____

6. base (b) = ■
   height (h) = 12 yd
   Area (A) = 98.4 yd^2

_____

7. base (b) = 15 mi
   height (h) = ■
   Area (A) = 180 mi^2

_____

Mixed Review

8. What is the area of a triangle with a base of 5 inches and a height of 6.5 inches?

_____

9. What is the median of this set of data? 45, 60, 34, 56, 20, 90, 34

_____

10. Write a number between 1.03 and 1.10.

_____

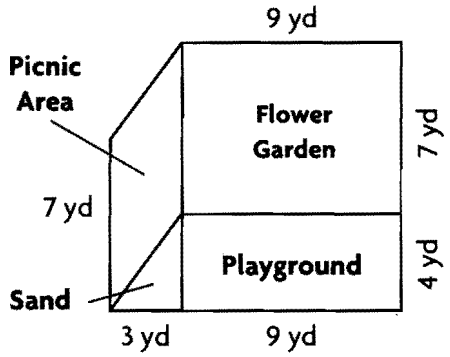
11. What number's value is 10,000 greater than 298,469?

_____

Name _____

Problem Solving Strategy: Solve a Simpler Problem

Solve a simpler problem to solve.



1. What is the area of the smallest section of the park?

_____

2. What is the area of the largest section of the park?

_____

3. How many square yards is the park?

_____

4. If a 2 yd by 6 yd rectangular pond were built next to the picnic section, what would the new area of the park be?

_____

Mixed Review

5. Each bottle of fertilizer covers 25 ft^2. How many bottles does the gardener need to fertilize the playground?

_____

6. It takes the gardener 5 minutes to mow 50 ft^2. How long will it take him to mow the playground?

_____

7. The sun's surface is close to 10,000°F. Its inner core may reach temperatures near 35 million degrees. The diameter of the sun is 864,000 mi. Tell whether too much or too little information was given to find the circumference of the sun.

_____

8. Nine planets revolve around the sun along oval-shaped paths. The Earth takes one year or 365 days to make one revolution. Tell whether too much or too little information was given to find the distance from the Earth to the sun.

_____

9. What is the perimeter of an equilateral triangle that has a side length of 16 cm?

_____

10. What is the area of a triangle that has a base of 4 in. and a height of 4 in.?

_____

Name _____

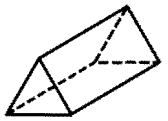
Nets for Solid Figures

Vocabulary

Complete.

A _____ is a two-dimensional pattern that can be folded into a three-dimensional polyhedron.

Match each solid figure with its net. Write *a*, *b*, *c*, or *d*.

1. 
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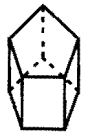
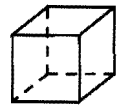
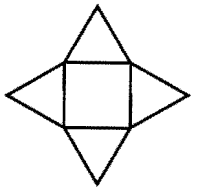
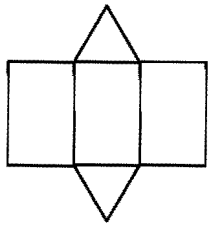
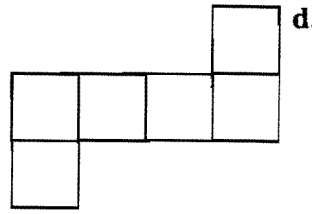
2. 
_____

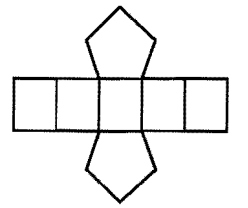
3. 
_____

4. 
_____

a. 

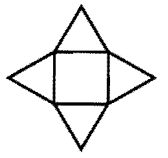
b. 

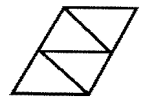
c. 

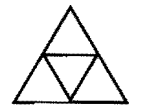
d. 

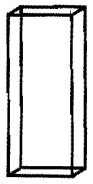
Circle the letter of the net that can be folded to make the figure.

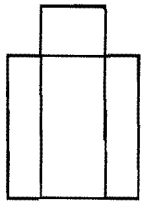
5. 

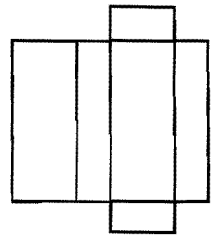
a. 

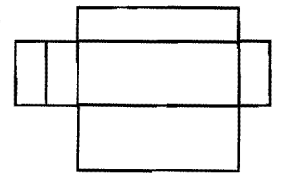
b. 

c. 

6. 

a. 

b. 

c. 

Mixed Review

7. What faces would you find in a net for a square pyramid?

_____

_____

8. Cara earns $36.75 a week for 7 hours of babysitting. How much does she earn in 4 weeks? How much does she earn an hour?

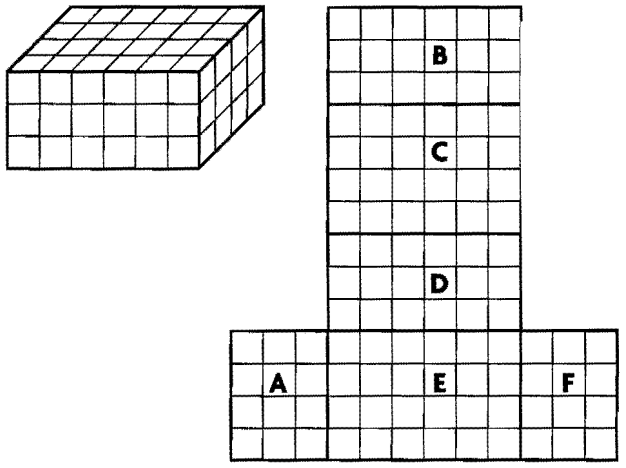
_____

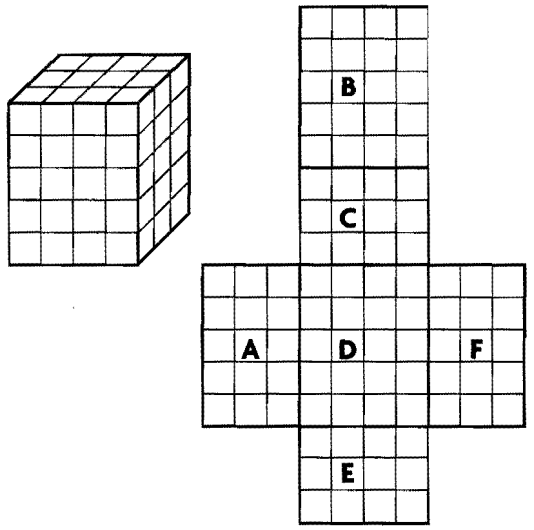
_____

Name _____

Surface Area

Use the net to find the area of each face. Then find the surface area of each prism.

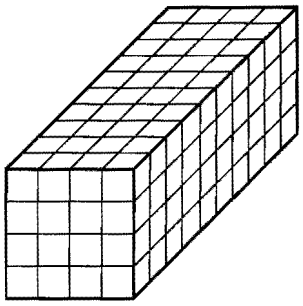
1. 

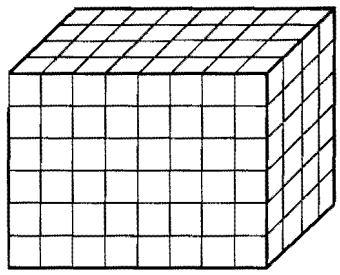
2. 

_____ _____

_____ _____

For 3–4, find the surface area in cm^2. You may want to make the net.

3. 

4. 

_____ _____

5. What is the surface area of a box 6 feet long, 4 feet wide, and 11 feet high?

6. What is the surface area of a cube whose sides are 12 feet long?

_____ _____

Mixed Review

7. $8 - 2\frac{3}{8}$

8. $35.8 \div 2$

9. 3.5×4.9

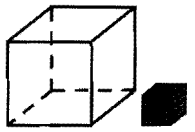
10. $5.79 \div 3$

_____ _____ _____ _____

Name _____

Algebra: Estimate and Find Volume

1. Estimate the number of small boxes that will fit in the large box.



_____

2. Estimate the volume of a box that is 7 m long on each side.

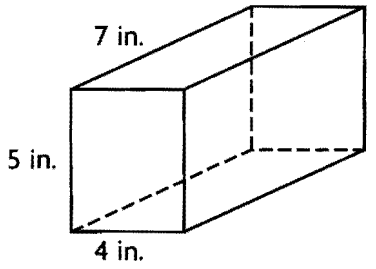
_____

3. A toy chest is $3\frac{5}{6}$ ft long, $1\frac{1}{6}$ ft wide, and $2\frac{1}{4}$ ft high. Estimate the volume of the toy chest.

_____

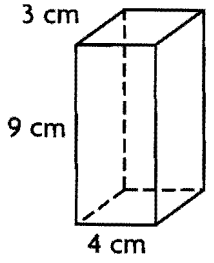
Find the volume of each rectangular prism.

4.



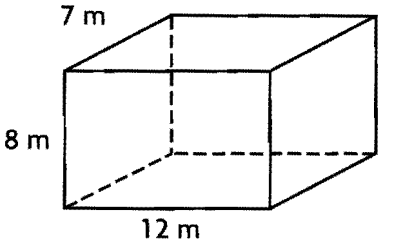
_____

5.



_____

6.



_____

Algebra Find the unknown dimension.

7. length = 11 yd
   width = 5 yd
   height = _____
   Volume = 165 yd^3

8. length = 14 ft
   width = 9 ft
   height = 4 ft
   Volume = _____

9. length = 8 in.
   width = _____
   height = 9 in.
   Volume = 288 $in.^3$

Mixed Review

10. Margie bought 8 cans of tomato soup and 4 cans of mushroom soup. She spent nine dollars and eighty-eight cents. The tomato soup cost $0.79 per can. What did the mushroom soup cost per can?

_____

11. Tom wants to buy a stereo that costs $540.00. He has saved $\frac{1}{3}$ of the cost. How much has Tom saved?

_____

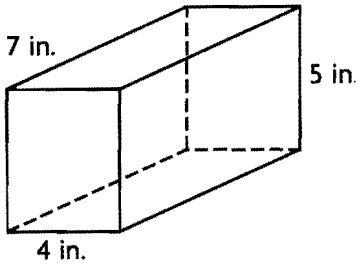
Name _____

Measure Perimeter, Area, and Volume

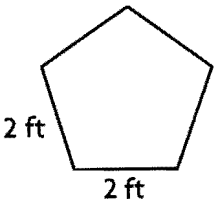
Tell the appropriate units for measuring each. Write *linear*, *square*, or *cubic*.

1. space in a cabinet _____
2. space in an oven _____
3. tile for a floor _____
4. a wallpaper border _____
5. paper to cover a box _____
6. fence for a garden _____

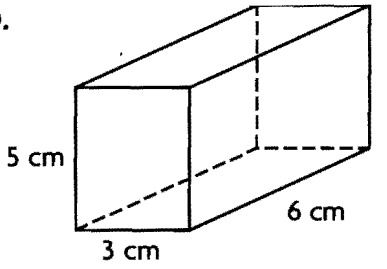
Write the units you would use to measure each.

7. 

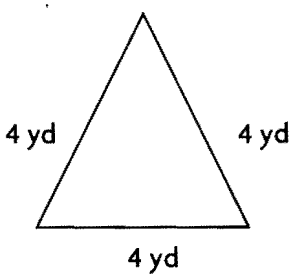
volume of this prism _____

8. 

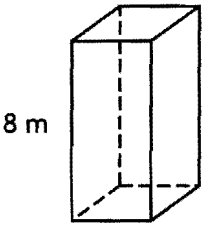
perimeter of this figure _____

9. 

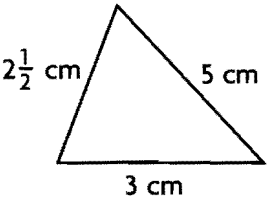
surface area of this prism _____

10. 

area of this figure _____

11. 

volume of this prism _____

12. 

area of this figure _____

Mixed Review

Evaluate.

13. $(27 - n) + 9$ if $n = 19$ _____
14. $(n \times 5) - 6$ if $n = 7$ _____

Name _____

Problem Solving Skill: Use a Formula

Use a formula and solve.

1. A garden that is 18 feet wide and 22 feet long needs to be fenced. Will 25 yards of fencing be enough? Explain.

2. The trailer of a lumber truck is 15 feet wide, 18 feet long, and 10 feet high. Is the truck large enough to carry 2,500 cubic feet of lumber?

3. Tim has a box that is 18 inches long and 12 inches wide and has a volume of 3,240 cubic inches. He wants to pack an object that is 9 inches long, 6 inches wide, and 16 inches high. Will the object fit in the box? Explain.

4. New flooring is being installed in the school foyer. The area is 15 feet wide and 33 feet long. How many square yards of flooring are needed? What is the perimeter of the foyer, measured in feet? Explain how you found your answers.

Mixed Review

Solve.

5. Classes at the high school begin at 7:45 A.M. Each class is 50 minutes long, and there is a 7-minute break after each class. At what time does the second class of the day end?

6. A swimming pool is 60 feet long and 30 feet wide. How many cubic feet of water will be needed to fill the pool to a depth of 8 feet?

Name _____

Understand Ratios

Vocabulary

Fill in the blank.

1. A _____ is a comparison of two quantities.

Write each ratio and name the type of ratio.

2. There were 4 baseballs and 6 basketballs.

_____

3. Margo had 3 quarters and 2 pennies.

_____

4. Math is preferred to science by 19 of 20 students.

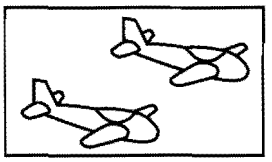
_____

5. Of 20 students, 11 are boys.

_____

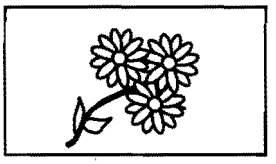
Write each ratio.

6. wings to planes



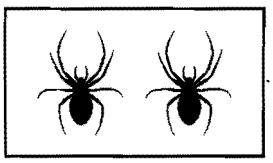
_____

7. flowers to stem



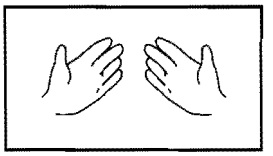
_____

8. legs to spiders



_____

9. fingers to hands



_____

Mixed Review

Write each fraction in simplest form.

10. $\frac{12}{24}$ _____

11. $\frac{6}{9}$ _____

12. $\frac{28}{49}$ _____

13. $\frac{96}{144}$ _____

14. $\frac{40}{45}$ _____

Name _____

Express Ratios

Write each ratio in three ways. Then name the type of ratio. Use the table below.

1. race games to sports games

_____

2. all games to arcade games

_____

3. sports games to all games

_____

Ben's Video Game Collection	
Type of Game	**Number of Games**
Race	5
Arcade	3
Sports	2

Circle *a* or *b* to show which fraction represents each ratio.

4. 7 to 9
   a. $\frac{9}{7}$ **b.** $\frac{7}{9}$

5. 6:2
   a. $\frac{6}{2}$ **b.** $\frac{2}{6}$

6. 9:3
   a. $\frac{9}{3}$ **b.** $\frac{3}{9}$

7. 11 to 16
   a. $\frac{16}{11}$ **b.** $\frac{11}{16}$

For 8–10, use the circle graph. Write each ratio in three ways.

8. What is the ratio of pictures to records?

_____

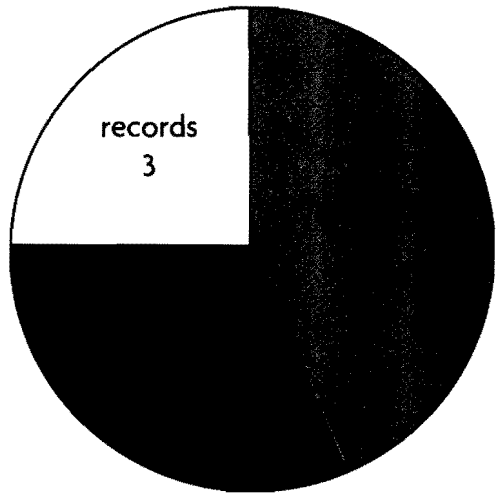
9. What is the ratio of pictures to all collectibles?

_____

10. What is the ratio of figurines to all collectibles?

_____

Common Collectibles



Mixed Review

11. What is the value of 3^4 ?

_____

12. Erik discovered he was $\frac{3}{4}$ as tall as Wilt Chamberlain, the basketball player. Chamberlain is 86 inches tall. How tall is Erik?

_____

Name _____

Ratios and Proportions

Vocabulary

Fill in the blank.

1. _____ are ratios that name the same amount.
2. A _____ is an equation that shows two equivalent ratios.

Write three ratios that are equivalent to the given ratio.

3. 7:1

4. 6:3

5. 3 to 2

6. $\frac{13}{15}$

Tell whether the following ratios are equivalent. Write *yes* or *no*.

7. $\frac{3}{8}$ and $\frac{9}{24}$

8. 4:5 and 5:4

9. 7 to 4 and 28 to 16

10. $\frac{8}{4}$ and $\frac{2}{1}$

11. 6:8 and 2:4

12. 3 to 15 and 4 to 20

Complete the ratio table.

13.

Number of oranges to make orange juice	5	____	____	____
Pints of orange juice	1	2	3	4

Tell whether the ratios form a proportion. Write *yes* or *no*.

14. $\frac{3}{4}$ and $\frac{6}{12}$ _____

15. $\frac{8}{3}$ and $\frac{24}{9}$ _____

16. $\frac{3}{6}$ and $\frac{15}{30}$ _____

Mixed Review

17. $9\overline{)36.36}$

18. $3\overline{)158.67}$

19. $7\overline{)588.42}$

20. $5\overline{)0.180}$

21. $6\overline{)53.652}$

Name _____

Scale Drawings

Vocabulary

Fill in the blank.

1. A ratio that compares the distance on a map to the actual distance is a _____.

Complete the ratio table.

2.

Scale Distance (in.)	1	2	_____	7	_____
Actual Length (ft)	18	36	90	_____	198

3.

4.

Scale Distance (cm)	1	4	7	_____	15
Actual Length (m)	7	28	_____	84	_____

5.

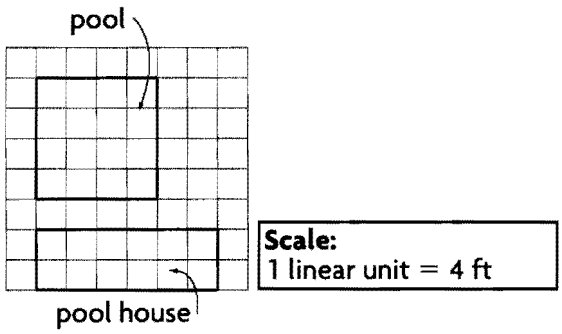
For 6–9, use the drawing of the patio and the scale.

6. What is the width of the pool in units?

_____

7. What is the actual width of the pool?

_____



8. What is the perimeter of the pool house in units? in feet?

_____

9. What is the ratio of linear units to feet?

_____

Mixed Review

10. How much fabric will Fran have left from a 20-yd bolt after cutting off $5\frac{1}{2}$ yd?

_____

11. Miguel's backyard is 28 ft long and 36 ft wide. It costs $0.50 per square foot to have grass planted. What is the total cost?

_____

Name _____

Problem Solving Skill

Too Much/Too Little Information

For 1–4, use this table. Write whether each problem has *too much* or *too little* information. Then solve if possible, or describe the additional information needed.

Who Buys Lunch?	
Grade	**Whole Grade:Buyers**
3	110:55
4	96:32
5	116:80
6	108:84

1. How many students are there in the fourth grade for every lunch buyer in the fourth grade?

_____

2. How many adult buyers are there for every buyer in fifth grade?

_____

3. What is the ratio of students in Grades 1–6 to lunch buyers?

_____

4. What is the ratio of lunch buyers in grades 3 through 5 to all students in those grades?

_____

Charneta loves a puppy at the pet store. His name is Beau, and he's a German shepherd. Beau costs $175.00. Charneta will work at Mr. Taylor's store for $6.00 an hour, sweeping floors and stocking shelves. How many hours will Charneta have to work to buy the dog?

5. What information is necessary to solve the problem?

   A the name of the dog

   B what kind of work Charneta will do

   C how much she will earn an hour

   D the store owner's age

6. What is the least number of hours Charneta can work in order to buy the dog?

   F 30 hours

   G 39 hours

   H 40 hours

   J 41 hours

Mixed Review

7. $22.21 + 78.99

8. $47.50 × 1.50

9. 32.498 − 17.020

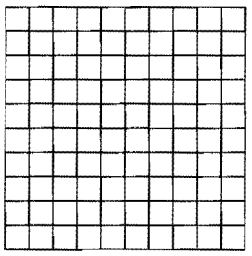
10. 156.52 + 819.75

Name _____

Understand Percent

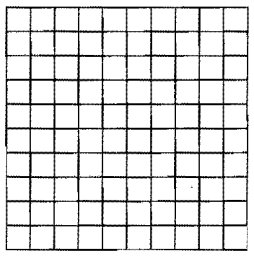
Model each ratio on the grid. Then write the percent.

1. 67 cents out of 1 dollar



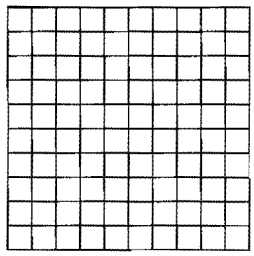
_____

2. 16 sheep out of 100 animals



_____

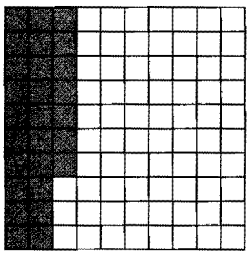
3. 58 girls out of 100 children



_____

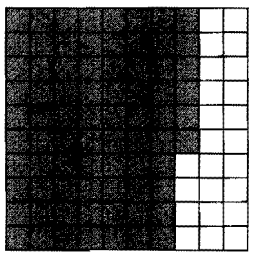
Write a percent to describe the shaded part.

4.



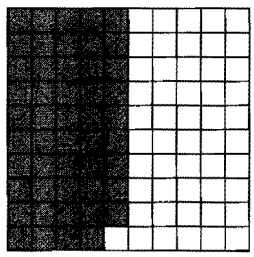
Percent _____

5.



Percent _____

6.



Percent _____

Choose the more reasonable percent. Circle *a* or *b*.

7. "*About half* the students bring their own lunches to school," said the cafeteria worker.

   a. 48 percent

   b. 85 percent

8. "*Very few* children are sent to the principal's office," said the teacher.

   a. 98 percent

   b. 2 percent

Mixed Review

Write as a decimal and a fraction.

9. thirty-nine hundredths

_____

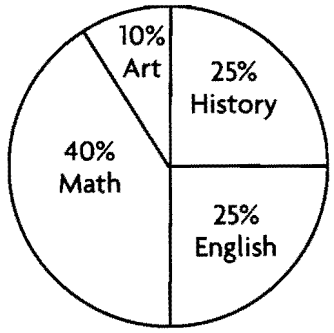
10. forty-four hundredths

_____

Name _____

Relate Decimals and Percents

Newly Acquired Library Books



For 1–4, use the circle graph. Write a decimal and a percent to describe each.

1. What part of the library books are art books?

_____

2. What part of the library books are English books?

_____

3. What part of the library books are not history books?

_____

4. What part of the library books are not math books?

_____

Write the number as a decimal and a percent.

5. sixty–four hundredths

_____

6. ninety–three hundredths

_____

7. fifteen hundredths

_____

8. thirty hundredths

_____

Write each decimal as a percent.

9. 0.46 _____

10. 0.79 _____

11. 0.20 _____

12. 0.03 _____

13. 0.18 _____

14. 0.86 _____

Write each percent as a decimal.

15. 38% _____

16. 74% _____

17. 2% _____

18. 16% _____

19. 22% _____

20. 91% _____

Mixed Review

21. $\begin{array}{r} 12 \\ \times\ 8 \\ \hline \end{array}$

22. $\begin{array}{r} 16 \\ \times\ 37 \\ \hline \end{array}$

23. $\begin{array}{r} 90 \\ \times\ 80 \\ \hline \end{array}$

24. $\begin{array}{r} 14 \\ \times\ 14 \\ \hline \end{array}$

25. $\begin{array}{r} 34 \\ \times\ 26 \\ \hline \end{array}$

Name _____

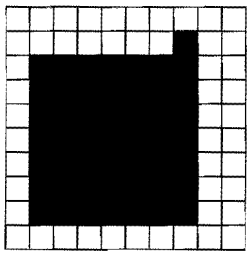
Fractions, Decimals, and Percents

Complete the tables. Write each fraction in simplest form.

	Fraction	Decimal	Percent
1.			12%
3.	$\frac{3}{4}$		

	Fraction	Decimal	Percent
2.	$\frac{17}{20}$		
4.			24%

Express the shaded part of each model as a decimal, a percent, and a fraction in simplest form.

5. 

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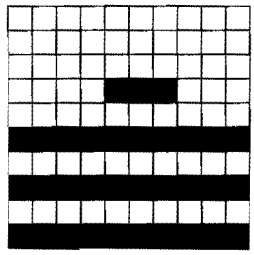
6. 

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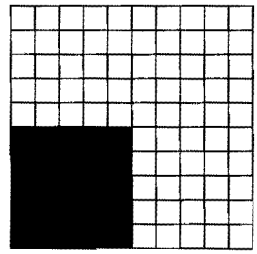
7. 

_____

Compare. Write <, >, or = in each ◯.

8. 11% ◯ 0.11

9. 75% ◯ $\frac{1}{3}$

10. 15% ◯ 1.5

11. 50% ◯ 0.25

Find the value of each variable. Let *f* represent a fraction, *d* represent a decimal, and *p* represent a percent.

12. $\frac{3}{4} = d = 75\%$

_____

13. $d = \frac{3}{10} = p$

_____

14. $f = p = 0.17$

_____

15. $f = d = 50\%$

_____

Mixed Review

Find the sum, product, or difference.

16. 294,432 + 126,008

17. 9,009 × 621

18. 237,432 − 49,163

19. 241,430 + 798,790

20. 6,855 × 530

21. 257,743 − 68,889

Name _____

Compare Fractions, Decimals, and Percents

Compare. Write <, >, or = for each ◯.

1. 80% ◯ 0.8
2. $\frac{3}{4}$ ◯ 90%
3. 0.55 ◯ 60%
4. $\frac{2}{5}$ ◯ 25%
5. 18% ◯ $\frac{1}{4}$
6. 0.45 ◯ $\frac{9}{20}$
7. $\frac{2}{3}$ ◯ 70%
8. 1% ◯ 0.1
9. 250% ◯ 2.05
10. $\frac{5}{4}$ ◯ 125%
11. 300% ◯ $\frac{3}{3}$
12. 1.075 ◯ 175%
13. $\frac{9}{10}$ ◯ 9%
14. 1.2 ◯ $\frac{7}{5}$
15. 25% ◯ $\frac{1}{5}$
16. 135% ◯ 1.35

Order from least to greatest. You may use a number line.

17. $\frac{1}{2}$, 5%, 0.55 _____
18. 0.85, $\frac{7}{8}$, 70% _____
19. 33%, 0.32, $\frac{3}{10}$ _____
20. $\frac{5}{2}$, 205%, 2.15 _____
21. 0.56, $\frac{5}{6}$, 80% _____
22. 1.9, 19%, $\frac{9}{5}$ _____
23. 15%, 0.015, $\frac{1}{5}$ _____
24. $\frac{3}{2}$, 3.2, 32% _____

Mixed Review

Find the sum or difference.

25. $^{+}7 + {}^{+}4$ _____
26. $^{-}5 + {}^{-}3$ _____
27. $^{+}9 + {}^{-}2$ _____
28. $^{-}7 + {}^{+}1$ _____
29. $^{+}8 - {}^{+}5$ _____
30. $^{+}6 - {}^{+}9$ _____
31. $^{-}4 - {}^{-}3$ _____
32. $^{-}5 - {}^{-}9$ _____
33. $^{-}8 + {}^{-}7$ _____
34. $^{-}9 - {}^{-}2$ _____
35. $^{+}4 - {}^{-}7$ _____
36. $^{+}2 + {}^{-}4$ _____

Name _____

Find a Percent of a Number

Find the percent of the number.

1. 5% of 50 _____
2. 15% of 45 _____
3. 35% of 42 _____
4. 200% of 80 _____
5. 150% of 20 _____
6. 65% of 150 _____
7. 60% of 93 _____
8. 60% of 60 _____
9. 150% of 75 _____
10. 25% of 200 _____
11. 2% of 48 _____
12. 40% of 150 _____

You can find the sales tax for any item you buy by finding a percent of the price. Find the sales tax for each price to the nearest cent.

13. price: $9.75
    tax rate: 3%
    _____
14. price: $101.40
    tax rate: 6.5%
    _____
15. price: $172.00
    tax rate: 11%
    _____
16. price: $63.99
    tax rate: 8%
    _____

Mixed Review

17. How many dimes are in $28.00?
    _____
18. Is 1.314 greater than or less than 1.341?
    _____
19. At $0.45 per dozen, how many dozens of oranges can you buy for $1.35?
    _____
20. A poultry farmer bought 2,000 chicks at $0.45 each. What did he pay for the chicks?
    _____
21. A butcher charged $7.44 for a certain cut of meat at $0.96 per pound. What was the weight of the meat?
    _____
22. The local baseball team bought 10 bats at $18.00 each and 7 balls at $1.98 each. If the 9 players shared the costs equally, how much was each player's share?
    _____

23. $\begin{array}{r} 17 \\ \times\ 0.8 \\ \hline \end{array}$
24. $\begin{array}{r} 42.5 \\ \times\ 1.6 \\ \hline \end{array}$
25. $\begin{array}{r} 3.55 \\ \times\ 20 \\ \hline \end{array}$
26. $\begin{array}{r} 170 \\ \times\ 2.9 \\ \hline \end{array}$
27. $\begin{array}{r} 4{,}615 \\ \times\ 0.88 \\ \hline \end{array}$

Name _____

Problem Solving Strategy

Make a Graph

Make a graph to solve.

1. Abigail surveyed the fifth-grade students to find out their favorite TV shows. She organized the data in the table below. What is the best way for her to display the data? Which TV show is most popular?

_____

FAVORITE TV SHOWS	
Show	**Percent of Votes**
Plimpton	20%
Queen of the Hill	40%
Atlas	10%
Harborwatch	10%
The Butler	20%

Mixed Review

Solve.

2. Tamala recorded the average temperature for 6 months. She recorded 48° in April, 59° in May, 69° in June, 76° in July, 74° in August, and 64° in September. How can she best show this data?

_____

3. Mylan spent $3 on a magazine. He spent half of his remaining money on a video game. He then spent half of his remaining money on a book. He had $12 left. How much money did Mylan begin with?

_____

4. A dog pen will be 18 feet long and 12 feet wide. One length will be formed by the side of a garage. How much fencing is needed for the other 3 sides?

_____

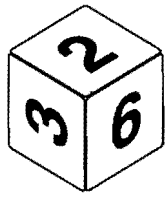
5. There were 63 people in a hotel. Then 7 checked out, and 3 times that number checked in. How many people are in the hotel now?

_____

Name _____

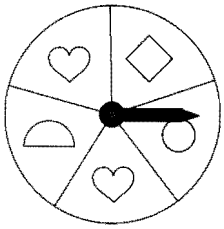
Probability Experiments

You toss a number cube labeled 1 to 6. Predict the probability of each.



1. tossing a 5 _____ out of _____
2. tossing a 7 _____ out of _____
3. tossing an even number _____ out of _____
4. tossing a multiple of 3 _____ out of _____

Melissa used the spinner for her experiment. She made a table to record the results of each spin.



Event	♡	◇	⌓	○
Number of Spins	𝍸 𝍸	𝍸	𝍸	𝍸 I
Total	10	5	4	6

Based on Melissa's results, predict the probability of each.

5. the pointer landing on the circle

_____

6. the pointer landing on the shape with no curved edges

_____

7. the pointer landing on the heart

_____

8. the pointer landing on the half circle

_____

Mixed Review

Find the value of *n*.

9. $12 + 5 = n$ _____
10. $20 - n = 5$ _____
11. $n - 8 = 15$ _____
12. $6 + n = 11$ _____
13. $n + 14 = 28$ _____
14. $40 - n = 5$ _____
15. $10 \times n = 100$ _____
16. $n \times 7 = 28$ _____
17. $81 \div n = 9$ _____
18. $8 \times 2 = n$ _____
19. $45 \div n = 5$ _____
20. $n \times 9 = 27$ _____

Divide.

21. $14\overline{)126}$
22. $6\overline{)0.036}$
23. $17\overline{)289}$
24. $23\overline{)1{,}035}$

Name _____

Probability Expressed as a Fraction

Vocabulary

Complete.

1. _____ is the chance that an event will happen.

2. Each event is _____, or has the same chance of happening.

Write a fraction for the probability of each event using a bag of 4 red, 1 green, 2 blue, and 3 yellow marbles.

3. green _____

4. red _____

5. orange _____

6. blue _____

Write a fraction for the probability of each event using a spinner with 2 red, 3 yellow, 1 blue, and 2 green sections.

7. yellow _____

8. red _____

9. yellow or blue _____

10. blue _____

11. Angie is one of 30 girls trying out for the 12 positions on the basketball team. What is the probability that Angie will make the team?

_____

_____

12. Of 100 tickets available for the school raffle, Tom bought 3, Jack bought 5, and Mark bought 2. What is the probability of each boy winning?

_____

_____

Mixed Review

13. $32\overline{)12.8}$ _____

14. $(7 \times 6) + (3 \times \frac{1}{2}) = n$ _____

15. $\frac{1}{6} \div \frac{1}{2}$ _____

16. $(7 \times 4) - (2.5 \times 2) = n$ _____

17. $\frac{2}{5} \times \frac{4}{3}$ _____

18. $329 - (12 \times 11) = n$ _____

Name _____

Probability and Predictions

The probability of winning is $\frac{8}{15}$. Predict the number of wins.

1. in 75 games _____
2. in 135 games _____
3. in 210 games _____

Express the experimental probability as a fraction. Use it to predict the same event in future trials.

4. 3 wins in 5 games
   10 more games
   _____
5. 4 tails in 8 tosses
   6 more tosses
   _____
6. 5 red marbles in 8 pulls
   24 more pulls
   _____
7. 2 losses in 3 games
   9 more games
   _____
8. 6 heads in 10 tosses
   15 more tosses
   _____
9. 4 blue tiles in 6 pulls
   18 more pulls
   _____

Diana surveyed 100 people about their birthdays. She found that 9 people have a June birthday. Use this information for Exercises 10–11.

10. What is the experimental probability that a random person surveyed has a June birthday?
    _____
11. If Diana were to survey 500 people, how many people would you predict to have a June birthday?
    _____

Mixed Review

Compare. Write <, >, or = in the ◯.

12. 50% ◯ 0.05
13. 103% ◯ 1.3
14. $\frac{13}{20}$ ◯ 65%
15. 300% ◯ $\frac{6}{2}$

Write each fraction or decimal as a percent.

16. $\frac{7}{5}$ _____
17. 0.017 _____
18. 2.0 _____
19. $\frac{19}{20}$ _____
20. 0.75 _____
21. $\frac{3}{10}$ _____
22. $\frac{1}{25}$ _____
23. 5.25 _____

Name _____

Tree Diagrams

Vocabulary

Fill in the blank.

1. A _____ shows all the possible outcomes of an event.

For 2–5, make a tree diagram to show the possible choices. Solve.

2. For a snack, Sue can have either an apple or a cheese slice. She can have either a glass of milk or a glass of grape juice. How many different snack choices does Sue have?

_____

3. For breakfast, Jill can have either oat or wheat cereal. She can top the cereal with either raisins, bananas, strawberries, or blueberries. How many breakfast choices does Jill have?

_____

4. Bill can make a picture with either paints or markers or both. He can use either construction paper or poster paper. How many different ways can Bill make a picture?

_____

5. For gift wrapping, Elsa has a choice of either red, blue, pink, or orange paper. She has a choice of either red, blue, pink, or orange ribbon. How many different ways can Elsa wrap a gift?

_____

Mixed Review

6. 4.01 + 3.69	7. 6.905 + 4.98	8. 9.463 − 1.02	9. 16.5 − 9.6	10. 28.06 + 5.09
11. 7.35 − 0.98	12. 7.150 + 5.051	13. 0.108 + 7.962	14. 0.54 − 0.37	15. 5.982 + 0.153
16. 19.71 − 15.09	17. 6.118 + 4.212	18. 31.407 + 50.527	19. 18.3 + 28.8	20. 6.3172 − 1.0984

Name _____

Arrangements and Combinations

For 1–2, use the letters A, R, M.

1. List the 6 two-letter arrangements that are possible.

_____

2. List the 3 combinations, or choices, of two letters that are possible.

_____

For 3–4, use the digits in 7,249.

3. List the 12 two-digit arrangements that are possible.

_____

4. List the 6 combinations, or choices, of two-digits that are possible.

_____

Each card has a different arrangement of the digits in the number 315. One card is chosen at random.

5. How many three-digit arrangements are possible? List them.

_____

6. Find the probability that the number is greater than 100.

_____

7. Find the probability that the tens digit is 5.

_____

8. Find the probability that the ones digit is greater than the tens digit.

_____

9. Find the probability that the number is less than 400.

_____

10. Find the probability that the number is greater than 525.

_____

Mixed Review

Solve.

11. $3 \times n = 24$	12. $y + 8 = 15$	13. $p - 9 = 4$	14. $a \div 8 = 6$
_____	_____	_____	_____
15. $12 + b = 20$	16. $k \times 7 = 63$	17. $60 \div r = 12$	18. $17 - x = 11$
_____	_____	_____	_____
19. $s \div 9 = 12$	20. $45 - e = 17$	21. $8 \times g = 40$	22. $w + 36 = 51$
_____	_____	_____	_____

Name _____

Problem Solving Strategy

Make an Organized List

Make an organized list to solve.

1. Aber is conducting a probability experiment with a number cube and two marbles. The cube is numbered 1–6. One marble is red, the other blue. How many possible outcomes are there for this experiment? What is the probability for getting 1 and blue?

_____

_____

2. Mark feeds his cat a cup of dry food and a can of wet food every day. The dry food is either chicken or fish flavored. The wet food is either tuna, salmon, or beef. List all the possible combinations of wet and dry cat food. What is the probability of choosing chicken?

_____

_____

_____

_____

Mixed Strategy Practice

Solve.

3. In the school election, Dave received 38 percent of the vote, Marcia received 41 percent, and Claudia received 21 percent. What type of graph would you use to display the data?

_____

4. Estelle uses the numbers 3, 5, and 7 to write two-digit numbers without repeating any digits in the same number. List her numbers.

_____

5. Martha has 6 coins that are quarters, dimes, and nickels. She has a total of $0.80. What combination of coins does she have?

_____

6. At the movies, Jorge spent $0.95 on soda and $2.25 on popcorn. The movie ticket cost $4.50. If he has $2.30 left, how much money did Jorge have to begin with?

_____