ARE YOU READY?

Pre-Course Test

Measure with Customary and Metric Units

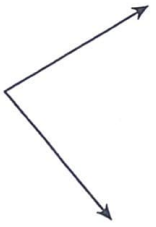
Measure each segment to the nearest eighth of an inch and to the nearest half of a centimeter.

1. _____

2. _____

Measure Angles

Use a protractor to measure each angle.

3. 

4. 

Ordered Pairs

Graph each point.

5. $A(1, 3)$

6. $B(-4, 5)$

7. $C(-3, -1)$

8. $D(2, -4)$

Connect Words and Algebra

9. Write an expression that represents the sum of a number x and 11.

10. Angelica has 15 comic books, and each month she buys 3 more comic books. Write an equation representing the number of comic books c she has at the end of any month m.

Evaluate Expressions

Evaluate each expression for the given value of the variable.

11. $3p + 6$ for $p = 4$

12. $6 - 4q$ for $q = 8$

Combine Like Terms

Simplify each expression by combining like terms.

13. $8b - 11b$

14. $12m^2 + 6m^2$

Solve One-Step Equations

Solve.

15. $8g = 56$

16. $h - 6 = -9$

Solve Multi-Step Equations

Solve.

17. $8p + 6 = 30$

18. $\frac{d}{4} - 6 = -9$

Solve and Graph Inequalities

Solve and graph each inequality.

19. $3g > 18$

20. $-4k > 8$

Simplify Fractions

Write each fraction in simplest form.

21. $\frac{14}{22}$

22. $\frac{20}{36}$

Solve Proportions

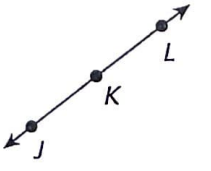
Solve each proportion.

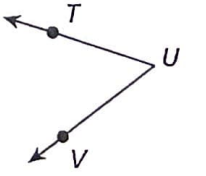
23. $\frac{3}{4} = \frac{h}{36}$

24. $\frac{2}{9} = \frac{k}{6}$

Name and Classify Angles

Name and classify each angle.

25. 

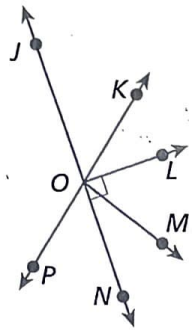
26. 

Angle Relationships

Give an example of each angle pair.

27. vertical angles

28. complementary angles



Parallel Lines and Transversals

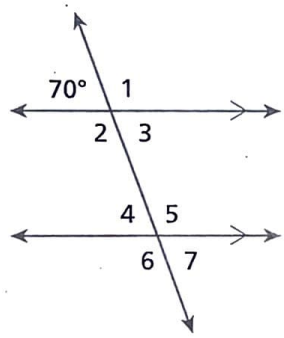
Find the measure of each angle.

29. $\angle 1$

30. $\angle 2$

31. $\angle 4$

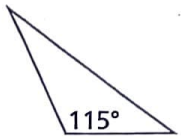
32. $\angle 6$



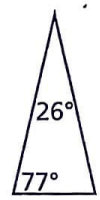
Classify Triangles

Tell whether each triangle is acute, right, or obtuse.

33.



34.



Evaluate Powers

Find the value of each expression.

35. 9^2

36. 12^3

Simplify Radical Expressions

Simplify each expression.

37. $\sqrt{49} \cdot \sqrt{100}$

38. $\sqrt{2} \cdot \sqrt{32}$

Rounding and Estimation

Round each decimal to the indicated place value.

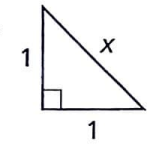
39. 7.449; tenth

40. 9.028; hundredth

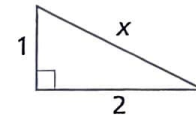
Pythagorean Theorem

Find x in each right triangle. If the length is not a whole number, give the answer in simplest radical form.

41.



42.



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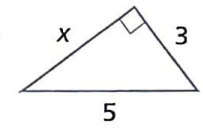
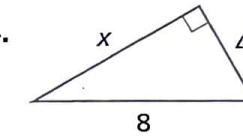


44.



Find Perimeter

Find the perimeter of each figure.

45. equilateral triangle with side length 4 in.

46. rectangle with length 10 cm and width 5 cm

Area of Polygons

Find the area of each figure.

47. square with side length 6 cm

48. rectangle with length 4.5 in. and width 2 in.

Volume

Find the volume of each solid.

49. cube with side length 5 cm

50. rectangular prism with height 7 in., width 4 in., and length 3 in.

ARE YOU READY?

Vocabulary

Match each term on the left with a definition on the right.

1. coordinate
2. metric system of measurement
3. expression
4. order of operations

A. a mathematical phrase that contains operations, numbers, and/or variables

B. the measurement system often used in the United States

C. one of the numbers of an ordered pair that locates a point on a coordinate graph

D. a list of rules for evaluating expressions

E. a decimal system of weights and measures that is used universally in science and commonly throughout the world

Measure with Customary and Metric Units

For each object tell which is the better measurement.

5. length of an unsharpened pencil
   $7\frac{1}{2}$ in. or $9\frac{3}{4}$ in.
6. the diameter of a quarter
   1 m or $2\frac{1}{2}$ cm
7. length of a soccer field
   100 yd or 40 yd
8. height of a classroom
   5 ft or 10 ft
9. height of a student's desk
   30 in. or 4 ft
10. length of a dollar bill
    15.6 cm or 35.5 cm

Combine Like Terms

Simplify each expression.

11. $-y + 3y - 6y + 12y$
12. $63 + 2x - 7 - 4x$
13. $-5 - 9 - 7x + 6x$
14. $24 - 3y + y + 7$

Evaluate Expressions

Evaluate each expression for the given value of the variable.

15. $x + 3x + 7x$ for $x = -5$
16. $5p + 10$ for $p = 78$
17. $2a - 8a$ for $a = 12$
18. $3n - 3$ for $n = 16$

Ordered Pairs

Write the ordered pair for each point.

19. A
20. B
21. C
22. D
23. E
24. F