Geometry Skills Readiness
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EVALUATE POWERS

Find the value of the expression.

1. $7^2 + 3^2$ **2.** $8^2 + 6^2$

ROUNDING AND ESTIMATION

Round the decimal to the indicated place value.

3. 9.53; tenth **4.** 3.076; hundredth

SIMPLIFY FRACTIONS

Write the fraction in simplest form.

5. $\frac{24}{40}$ **6.** $\frac{6}{33}$

RATIOS

Use the table to write each ratio in simplest form.

Rental Cars	
Gray	15
White	9
Blue	6

7. gray cars to white cars

8. blue cars to total cars

MEASURE WITH CUSTOMARY AND METRIC UNITS

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

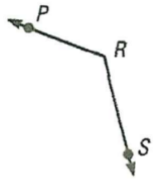
9. _____

10. _____

NAME AND CLASSIFY ANGLES

Name and classify the angle.

11.



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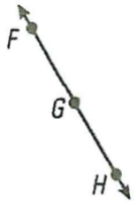


MEASURE ANGLES

Use a protractor to measure the angle.

13.

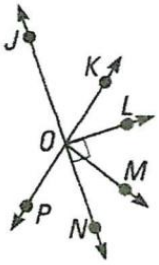
14.

ANGLE RELATIONSHIPS

Use the diagram to give an example of the angle pair.

15. complementary angles

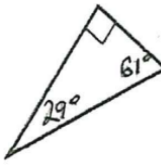
16. adjacent angles



CLASSIFY TRIANGLES

Tell whether the triangle is *acute*, *right*, or *obtuse*.

17.



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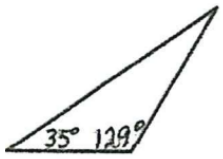

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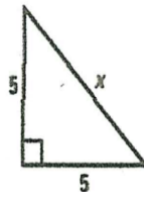
PYTHAGOREAN THEOREM

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

19.



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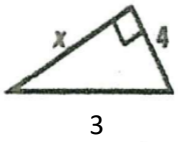


FIND PERIMETER

Find the perimeter of the figure.

21. equilateral pentagon with side length 7 in.

22. square with side length 2 ft

23. rectangle with length 8 cm and width 6 cm

AREA OF POLYGONS

Find the area of the figure.

24. square with side length 9 in.

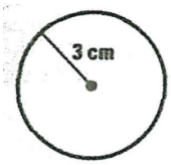
25. rectangle with length 3.5 cm and width 3 cm

26. triangle with base 10 ft and height 3 ft

CIRCUMFERENCE AND AREA OF CIRCLES

Find the circumference and area of the circle. Give your answers in terms of π.

27.



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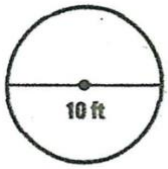

SIMPLIFY RADICAL EXPRESSIONS

Simplify the expression.

29. $\sqrt{64} \cdot \sqrt{81}$

30. $\sqrt{\frac{36}{100}}$

EVALUATE EXPRESSIONS

Evaluate the expression for the given value of the variable.

31. $4t + 7$ for $t = 7$

32. $5w - 7$ for $w = -4$

33. $\frac{g}{3} + (-2)$ for $g = 9$

34. $(h + 9)(h - 9)$ for $h = 11$

SOLVE MULTI-STEP EQUATIONS

Solve.

35. $7p + 5 = 47$

36. $2q - 7 = 31$

37. $\frac{e}{5} - 6 = -9$

38. $\frac{d}{3} + 4 = 1$

GRAPH LINEAR FUNCTIONS

Graph the function.

39. $y = x + 3$

40. $y = 2x - 3$

41. $y = \frac{1}{2}x$

42. $y = -3$

SOLVE PROPORTIONS

Solve the proportion.

43. $\frac{4}{5} = \frac{h}{35}$

44. $\frac{7}{m} = \frac{21}{30}$

45. $\frac{n}{2} = \frac{5}{4}$

46. $\frac{2}{7} = \frac{5}{p}$

ORDERED PAIRS

Graph the point.

47. $A(2, 2)$

48. $B(-3, 3)$

49. $C(-3, -3)$

50. $D(3, -3)$

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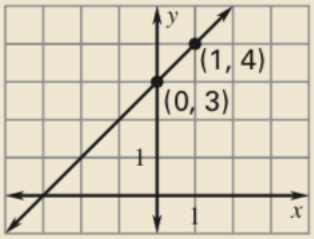
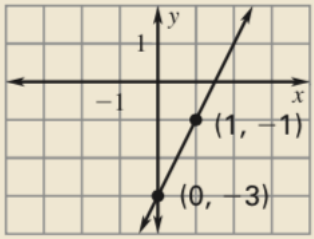
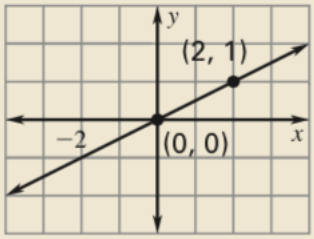
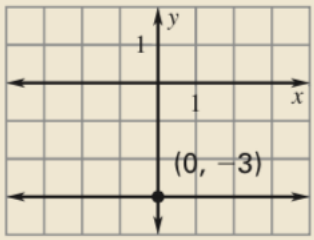
Answers:

1. 58
2. 100
3. 9.5
4. 3.08
5. $\frac{3}{5}$
6. $\frac{2}{11}$
7. 5 to 3, 5 : 3, or $\frac{5}{3}$
8. 1 to 5, 1 : 5, or $\frac{1}{5}$
9. $1\frac{5}{8}$ in.; 4.0 cm
10. 1 in.; 3.0 cm
11. $\angle PRS$; obtuse
12. $\angle FGH$; straight
13. 40°
14. 135°
15. *Sample answer:* $\angle JOK$ and $\angle KOL$
16. *Sample answer:* $\angle KOM$ and $\angle MON$
17. right
18. obtuse
19. $5\sqrt{2}$
20. $4\sqrt{3}$
21. 35 in.
22. 8 ft
23. 28 cm
24. 81 in.^{2}
25. 10.5 cm^2
26. 15 ft^2
27. 6π cm; 9π cm^2
28. 10π ft, 25π ft^2
29. 72
30. $\frac{3}{5}$
31. 35
32. -27
33. 1
34. 40
35. $p = 6$
36. $q = 19$
37. $e = -15$
38. $d = -9$
39. 

40. 

41. 

42. 

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43. $h = 28$
44. $m = 10$
45. $n = 2.5$
46. $p = 17.5$

47–50.