Geometry
ASSIGNMENT 1.5

1. A _____ is a number that is only divisible by 1 and itself.

2. The first five primes are ___ , ___ , ___, ___, and ___.

3. The symbol $\sqrt{\ }$ is called a _____.

4. The most common radical in Geometry is the _____($\sqrt[2]{\ }$).

5. The _____ is a method used to simplify radicals.

6. A segment running left and right can be referred to as a _____ segment.

7. A segment running up and down can be referred to as a _____ segment.

8. You can NOT count the length of a segment that runs _____.

9. The distance formula is: _____.

Simplify the radical.

10. $\sqrt{121}$

11. $\sqrt{18}$

12. $\sqrt{72}$

13. $\sqrt{90}$

14. $\sqrt{27}$

15. $\sqrt{240}$

16. Find the distance between the endpoints of $\overline{XY}$ given $X(-1,3)$ and $Y(4,-9)$.

17. Find the distance between the endpoints of $\overline{AB}$ given $A(0,-3)$ and $B(6,-5)$.

18. Find the length of $\overline{CD}$ given C(−7, 3) and D(−4, −1).

19. Find the length of $\overline{QP}$ given Q(1, 0) and P(−4, −2).

The figure to the right is a right prism. Complete each statement with parallel, perpendicular, or skew.

20. $\overleftrightarrow{WQ}$ and $\overleftrightarrow{ZR}$ are _____.

21. $\overleftrightarrow{XY}$ and $\overleftrightarrow{YS}$ are _____.

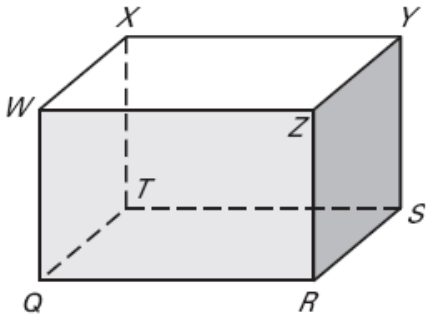
22. $\overleftrightarrow{WZ}$ and $\overleftrightarrow{RS}$ are _____.

23. $\overleftrightarrow{QT}$ and $\overleftrightarrow{XT}$ are _____.

24. $\overleftrightarrow{WQ}$ and $\overleftrightarrow{TS}$ are _____.

25. $\overleftrightarrow{XY}$ and $\overleftrightarrow{TS}$ are _____.

26. $\overleftrightarrow{YZ}$ and $\overleftrightarrow{TQ}$ are _____.



27. Plane WXT and plane ZRS are _____.

28. Plane WXZ and plane XTS are _____.

Use the diagram to the right to complete the following problems.

29. Are points J, K, and L collinear?

30. Are points J, K, and L coplanar?

31. Are points J, K, and M collinear?

32. Are points J, K, M, and Q coplanar?

33. Name the intersection of $\overleftrightarrow{KL}$ and $\overleftrightarrow{PQ}$.

34. Name the intersection of $\overleftrightarrow{KL}$ and plane KMN.

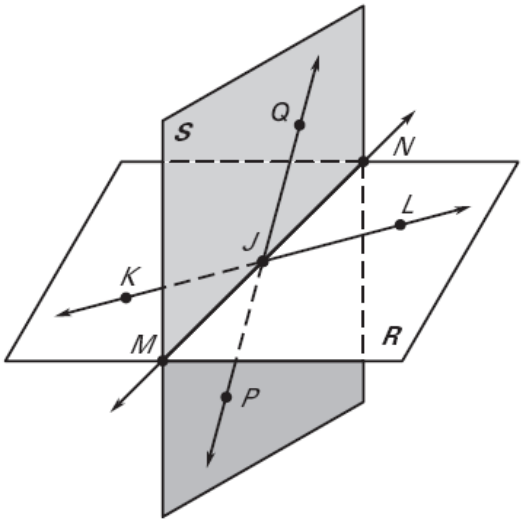
35. Name the intersection of plane R and plane S.

36. Name two segments on $\overleftrightarrow{KL}$ with endpoint L.

37. Name all rays with endpoint J.

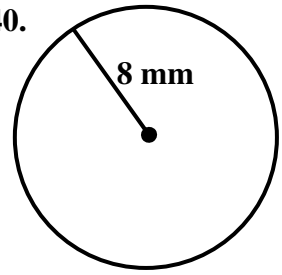
38. Are points K, J, and P coplanar?

39. Give five other names for $\overleftrightarrow{QP}$.



Find the circumference and area of the circle.
Leave answer in terms of π.

40.



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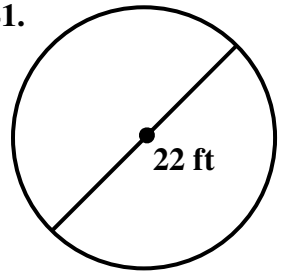
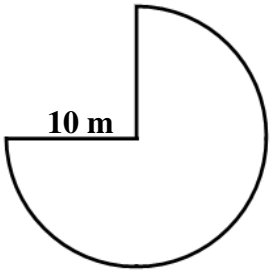


Find the area of the figure.
Leave answer in terms of π.

42.



43. The area of a triangle is 27 m^2 and its base is 3 m. Find the height.

44. The area of a circle is 196π mi^2. Find its circumference.

45. The area of a rectangle is 96 square inches and its height is 8 inches. What is the perimeter of the rectangle?

46. The length of a rectangle is four more than three times the width. Given the perimeter is 48 ft, find the dimensions (width and length) of the rectangle.

Draw a segment with indicated length.

47. $1\frac{7}{8}$ in.

48. 3.3 cm

49. 21 mm

Complete the conversion.

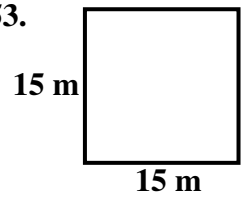
50. 74 in. = _____ ft

51. 17 ft = _____ yd

52. 68 mm = _____ cm

Find the perimeter and area of the figure.

53.



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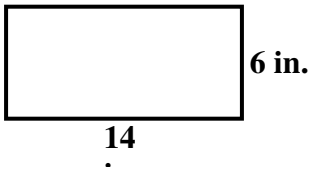

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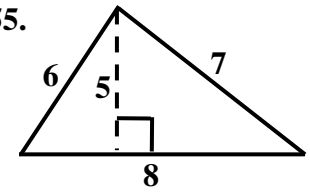
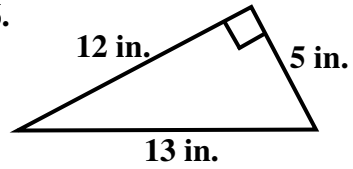


Find the area of the figure.

56.



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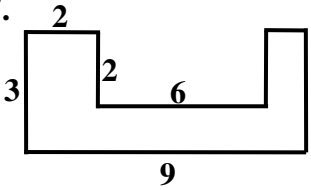

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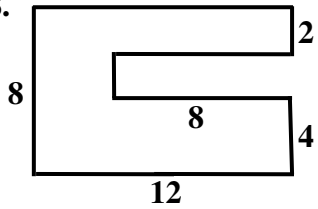
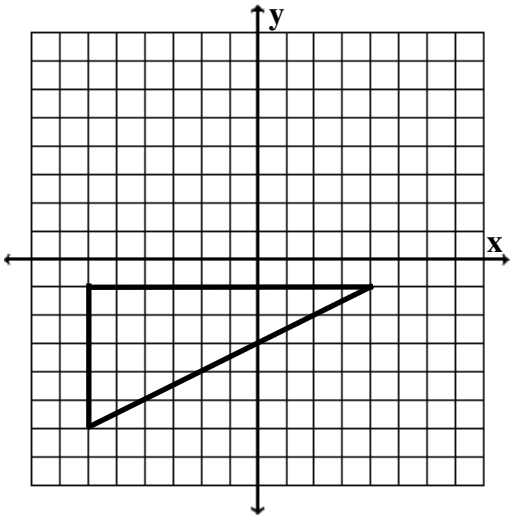


Find the area of the figure on the coordinate plane.

59.



60. A sewing club is making a quilt consisting of 16 squares with each side of the square 10 centimeters. If the quilt has four rows and four columns, what is the perimeter of the quilt?

Answer Key:

1) Prime **2)** 2, 3, 5, 7, and 11 **3)** radical **4)** square root **5)** Prime Factor Tree
6) horizontal **7)** vertical **8)** diagonally **9)** $d=\sqrt{(x_1-x_2)^2+(y_1-y_2)^2}$ **10)** 11 **11)** $3\sqrt{2}$
12) $6\sqrt{2}$ **13)** $3\sqrt{10}$ **14)** $3\sqrt{3}$ **15)** $4\sqrt{15}$ **16)** $XY=13$ **17)** $AB=2\sqrt{10}$ **18)** $CD=5$
19) $QP=\sqrt{29}$ **20)** parallel **21)** perpendicular **22)** skew **23)** perpendicular **24)** skew **25)** parallel
26) parallel **27)** parallel **28)** perpendicular **29)** Yes **30)** Yes **31)** No **32)** No
33) J **34)** $\overleftrightarrow{KL}$ **35)** $\overleftrightarrow{MN}$ **36)** $\overline{KL}$ and $\overline{JL}$ **37)** $\overrightarrow{JQ},\overrightarrow{JK},\overrightarrow{JP},\ \overrightarrow{JL},\overrightarrow{JN}$, and $\overrightarrow{JM}$ **38)** Yes **39)** $\overrightarrow{PQ},\overrightarrow{JQ},\overrightarrow{QJ},\overrightarrow{JP}$, and $\overrightarrow{PJ}$
40) $C=16\pi$ mm, $A=64\pi$ mm^2 **41)** $C=22\pi$ ft, $A=121\pi$ ft^2 **42)** $A=75\pi$ m^2 **43)** h = 18 m
44) $C=28\pi$ mi. **45)** P = 40 in. **46)** $w=5$ ft, $\ell=19$ ft **47-49)** See Teacher **50)** $6\frac{1}{6}$ ft **51)** $5\frac{2}{3}$ yd
52) $6\frac{4}{5}$ cm or 6.8 cm **53)** $P=60$ m, $A=225$ m^2 **54)** $P=40$ in., $A=84$ in.^{2} **55)** $P=21$ units, $A=20$ units^2
56) $A=30$ in.^{2} **57)** $A=15$ units^2 **58)** $A=80$ units^2 **59)** $A=25$ units^2 **60)** $P=160$ cm