**Geometry**
**ASSIGNMENT 1.4**

**1.** Two lines are _____ if they are coplanar, but do not intersect.

**2.** Two lines are _____ if they intersect to form a right angle (90°) angle.

**3.** Two line are _____ if they are noncoplanar and do not intersect.

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

**4.** $\overleftrightarrow{WQ}$ and $\overleftrightarrow{ZR}$ are _____.

**5.** $\overleftrightarrow{XY}$ and $\overleftrightarrow{YS}$ are _____.

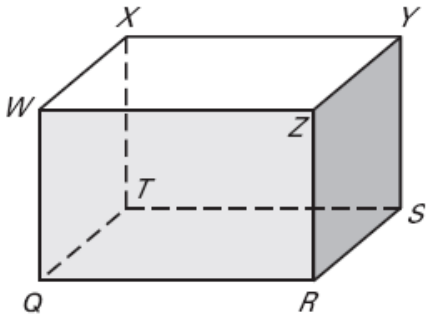
**6.** $\overleftrightarrow{WZ}$ and $\overleftrightarrow{RS}$ are _____.

**7.** $\overleftrightarrow{QT}$ and $\overleftrightarrow{XT}$ are _____.

**8.** $\overleftrightarrow{WQ}$ and $\overleftrightarrow{TS}$ are _____.

**9.** $\overleftrightarrow{XY}$ and $\overleftrightarrow{TS}$ are _____.

**10.** $\overleftrightarrow{YZ}$ and $\overleftrightarrow{TQ}$ are _____.




**11.** Plane WXT and plane ZRS are _____.

**12.** Plane WXZ and plane XTS are _____.

Sketch the figure described.
**Note:** There are many different ways to sketch a figure with the follwing descriptions.

**13.** Three points that are collinear.

**14.** Four points that are coplanar.

**15.** Four lines that intersect at one point.

**16.** Three lines with only two points of intersection.

**17.** Two perpendicular lines.

**18.** Two rays that intersect at their endpoints.

**19**. Three segments that all share the same endpoint in common.

**20.** A line and a plane that intersect at one point.

**21.** Two planes that do not intersect.

**22.** Two planes that intersect in one line.

**23.** Draw three noncollinear points A, B, and C. Sketch $\overleftrightarrow{AB}$. Then add a point D and sketch $\overleftrightarrow{CD}$ so that $\overleftrightarrow{CD}$ intersects $\overleftrightarrow{AB}$ at point B.
**Note:** There are many different correct diagrams.

**24.** Draw four noncollinear points A, B, C, and D. Then sketch $\overline{AB}$, $\overrightarrow{BC}$, and $\overleftarrow{AD}$.
**Note:** There are many different correct diagrams.

Determine whether the given statement is true or false.

**25.** Points S, P, and T are collinear.

**26.** Points S, P, T, and V are noncoplanar.

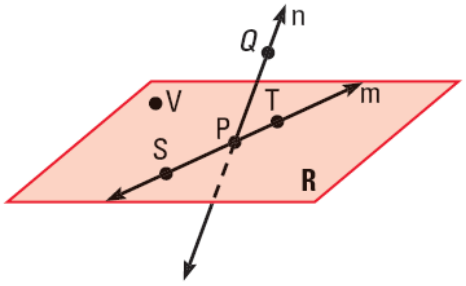
**27.** Points S, P, Q, and V are coplaner.

**28.** Points S, P, and Vare noncollinear.

**29.** Line n and line m intersect at point P.

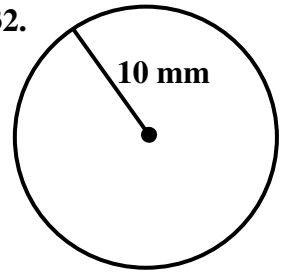
**30.** $\overleftrightarrow{PQ}$ and plane R intersect at point S.

**31.** Line m and plane R intersect at point T.

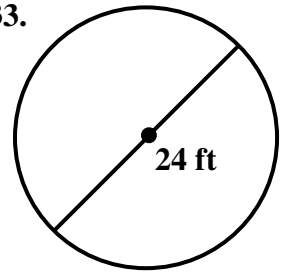



Find the circumference and area of the circle.
Leave answer in terms of $\pi$.

**32.**

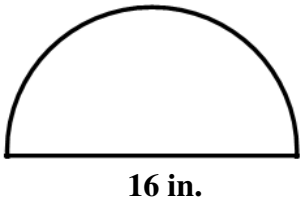



**33.**




Find the area of the figure.
Leave answer in terms of $\pi$.

**34.**



**35.** The perimeter of a rectangle is 46 ft. and its width is 11 ft. Find the length.

**36.** The area of a rectangle is 78 $in.^2$ and its height is 6 in. What is the length of the base?

**37.** The area of a triangle is 30 $m^2$ and its base is 10 m. Find its height.

**38.** The area of a triangle is 27 $ft^2$ and its height is 9 ft. Find the base.

**39.** The circumference of a circle is $28\pi$ units What is the area?

**40.** The area of a circle is $81\pi$ $mi^2$. Find its circumference.

**41.** The area of a rectangle is 63 square inches and its height is 9 inches. What is the perimeter of the rectangle?

**42.** The length of a rectangle is five more than twice the width. Given the perimeter is 64 ft, find the dimensions (width and length) of the rectangle.

Draw a segment with indicated length.

**43.** $1\frac{5}{16}$ in.

**44.** 2.4 cm

**45.** 28 mm

Complete the conversion.

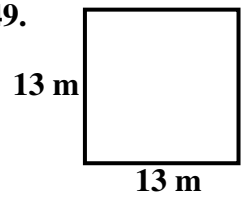
**46.** 64 in. = _____ ft

**47.** 14 ft = _____ yd

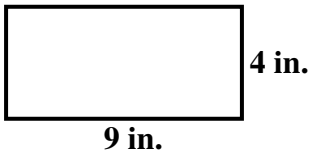
**48.** 77 mm = _____ cm

Find the perimeter and area of the figure.

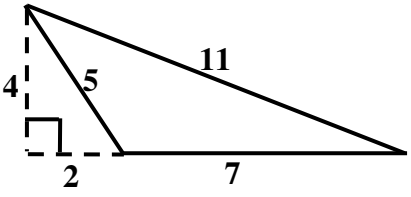
**49.**




**50.**

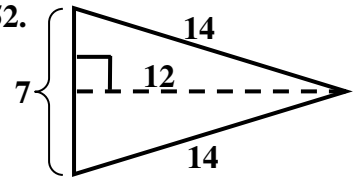



**51.**



Find the area of the figure.

**52.**

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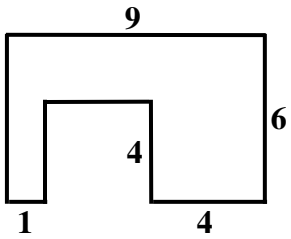


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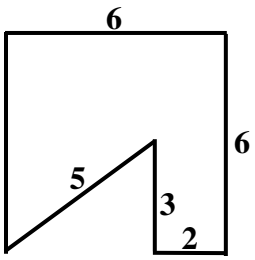
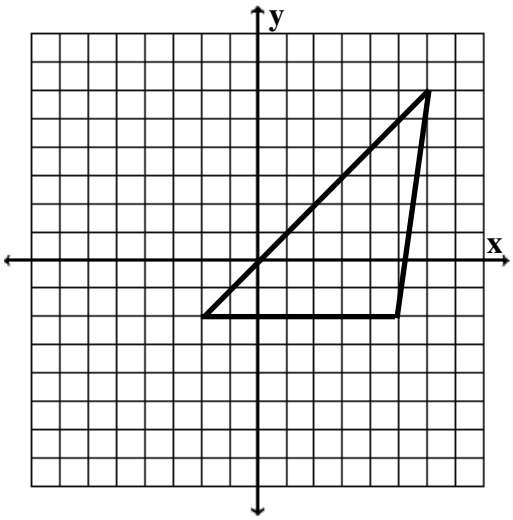



Find the area of the figure on the coordinate plane.

**55.**

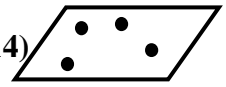



**56.** How many square inches are in four square feet?

**Answer Key:**

**1)** parallel **2)** perpendicular **3)** skew **4)** parallel **5)** perpendicular **6)** skew **7)** perpendicular **8)** skew **9)** parallel **10)** parallel **11)** parallel **12)** perpendicular **13)**

**14)**



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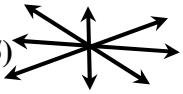

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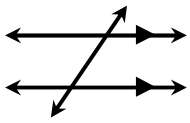

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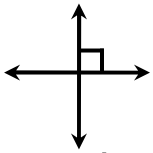

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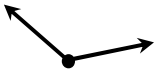
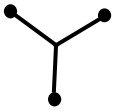


**19)**



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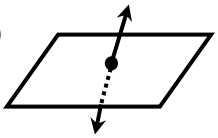

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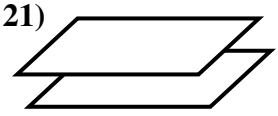

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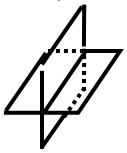

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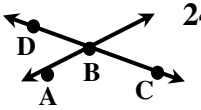
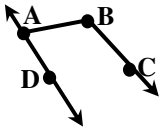



**24)**




**25)** True **26)** False **27)** False **28)** True **29)** True **30)** False **31)** False

**32)** $C = 20\pi$ mm, $A = 100\pi$ mm$^2$ **33)** $C = 24\pi$ ft, $A = 144\pi$ ft$^2$ **34)** $A = 32\pi$ in.$^2$ **35)** $\ell = 12$ ft

**36)** $b = 13$ in. **37)** $h = 6$ m **38)** $b = 6$ ft **39)** $A = 196\pi$ ft **40)** $C = 18\pi$ mi. **41)** $P = 32$ in.

**42)** $w = 9$ ft, $\ell = 23$ ft **43-45)** See Teacher **46)** $5\frac{1}{3}$ ft **47)** $4\frac{2}{3}$ yd **48)** $7\frac{7}{10}$ cm or 7.7 cm

**49)** $P = 52$ m, $A = 169$ m$^2$ **50)** $P = 26$ in., $A = 36$ in.$^2$ **51)** $P = 23$ units, $A = 14$ units$^2$

**52)** $A = 42$ in.$^2$ **53)** $A = 38$ units$^2$ **54)** $A = 30$ units$^2$ **55)** $A = 28$ units$^2$ **56)** 576 in.$^2$