Geometry
ASSIGNMENT 1.6

1. _____ means to cut in half.

2. A _____ is a point on a segment that bisects the segment.

3. The midpoint formula is: _____.

4. Find the midpoint of $\overline{CD}$ given its endpoints.

$C(-13,-2)$ $D(5,8)$

5. Find the midpoint of $\overline{AB}$ given its endpoints.

$A(2,4)$ $B(-3,6)$

6. The coordinates of one endpoint, A, and the midpoint, M, of $\overline{AB}$ given. Find the coordinates of the other endpoint.

$A(4,-3)$ $M(-1,6)$

7. Given the midpoint $M\left(-\frac{5}{2},1\right)$ and an endpoint $F(2,-1)$ of $\overline{FG}$, find the other endpoint.

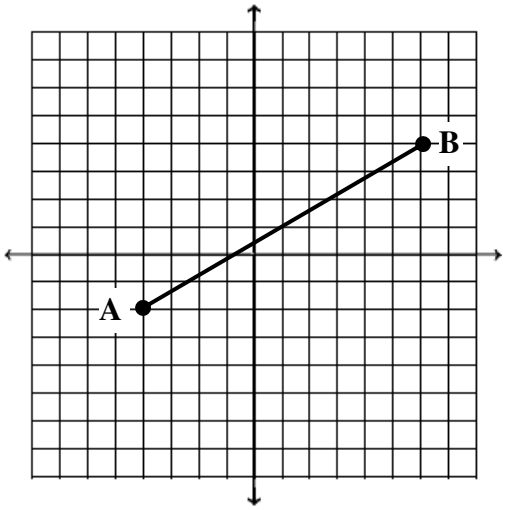
8. Find the length of segment $\overline{XY}$ given the coordinates of its endpoints.

$X(1,7)$ $Y(-2,3)$

9. Find the distance between the endpoints of $\overline{AB}$.

$A(2,3)$ $B(4,-1)$

10. Find the length of $\overline{AB}$ and its midpoint.



Decide whether the statement is true or false.

11. Points A, C, and E are collinear.

12. Points A, B, C and F are coplanar.

13. Point E, C, and D are noncollinear.

14. Points A, C, D, and F are coplanar.

15. Point A lies on $\overleftarrow{CB}$.

16. Point B lies on $\overrightarrow{CA}$.

17. Point F lies on plane *P*.

18. $\overleftrightarrow{AB}$ and line *k* are the same line.

19. $\overline{CE}$ and $\overline{CD}$ are part of line ℓ..

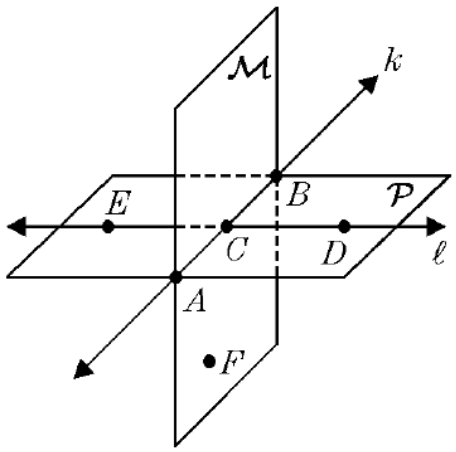
20. The intersection of plane *M* and plane *P* is $\overleftrightarrow{ED}$.

21. The intersection of plane *M* and plane *P* is $\overleftrightarrow{AB}$.

22. $\overleftrightarrow{AB}$ and line ℓ intersect.

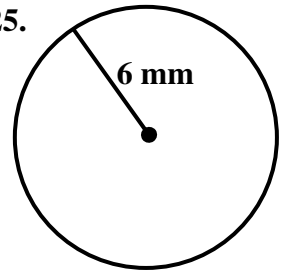
23. $\overrightarrow{CA}$ and $\overrightarrow{CD}$ intersect at point E.

24. $\overline{AF}$ and $\overline{CD}$ intersect at point E.



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

25.



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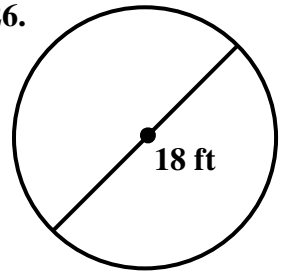
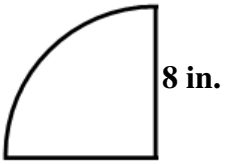


Find the area of the figure.
Leave answer in terms of π.

27.



28. The area of a triangle is 35 m^2 and its base is 7 m. Find the height.

29. The circumference of a circle is 30π in.. Find its area.

30. The perimeter of a rectangle is 24 inches and its height is 4 inches. What is the area of the rectangle?

31. The length of a rectangle is two more than three times the width. Given the perimeter is 76 ft, find the dimensions (width and length) of the rectangle.

Draw a segment with indicated length.

32. $1\frac{3}{16}$ in.

33. 2.9 cm

34. 24 mm

Complete the conversion.

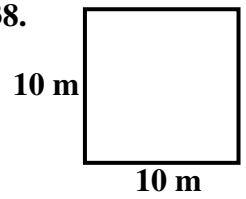
35. 82 in. = _____ ft

36. 19 ft = _____ yd

37. 63 mm = _____ cm

Find the perimeter and area of the figure.

38.



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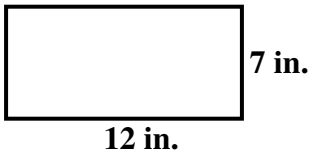

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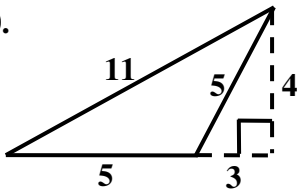
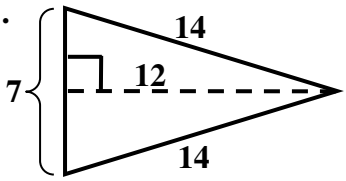


Find the area of the figure.

41.



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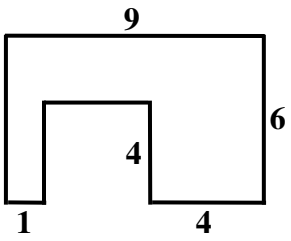

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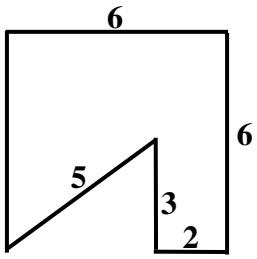
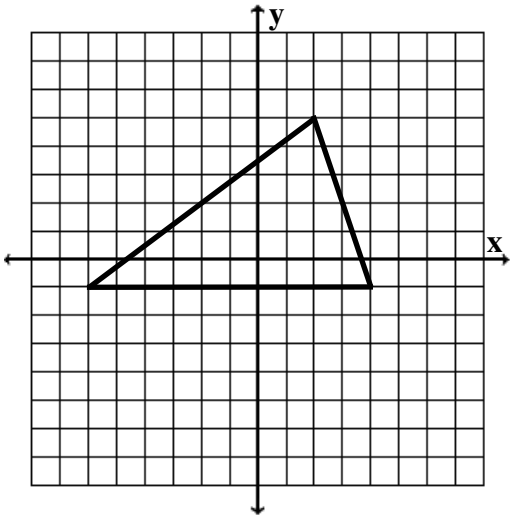


Find the area of the figure on the coordinate plane.

44.



45. How many square inches are there in two square feet.

Answer Key:

1) Bisect **2)** midpoint **3)** $M\left(\frac{x_1+x_2}{2},\frac{y_1+y_2}{2}\right)$ **4)** $(-4,3)$ **5)** $\left(-\frac{1}{2},5\right)$

6) $(-6,15)$ **7)** $(-7,3)$ **8)** $XY=5$ **9)** $AB=2\sqrt{5}$ **10)** $AB=2\sqrt{34}$, M(1,1) **11)** False

12) True **13)** False **14)** False **15)** True **16)** False **17)** False **18)** True **19)** True **20)** False

21) True **22)** True **23)** False **24)** False **25)** $C=12\pi$ mm, $A=36\pi$ mm^2

26) $C=18\pi$ ft, $A=81\pi$ ft^2 **27)** $A=16\pi$ in.^{2} **28)** $h=10$ m **29)** $A=225\pi$ in. **30)** $A=32$ in.^{2}

31) $w=9$ ft, $\ell=29$ ft **32-34)** See Teacher **35)** $6\frac{5}{6}$ ft **36)** $6\frac{1}{3}$ yd **37)** $6\frac{3}{10}$ cm or 6.3 cm

38) $P=40$ m, $A=100$ m^2 **39)** $P=38$ in., $A=84$ in.^{2} **40)** $P=21$ units, $A=10$ units^2

41) $A=42$ units^2 **42)** $A=38$ units^2 **43)** $A=30$ units^2 **44)** $A=30$ units^2 **45)** 288 in.^{2}