

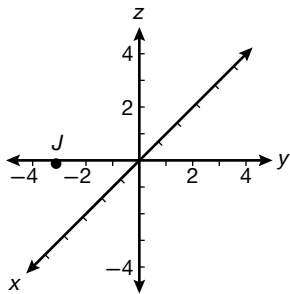
Warm Up 108

1. coordinate
2. $A(-2, 5)$ and $B(3, -3)$
3. C

Lesson Practice 108

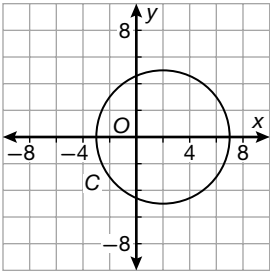
- a. The coordinates are $A(0, 0, 0)$, $B(3, 0, 0)$, $C(3, 3, 0)$, $D(0, 3, 0)$, $E(0, 0, 5)$, $F(3, 0, 5)$, $G(3, 3, 5)$, and $H(0, 3, 5)$.

b.



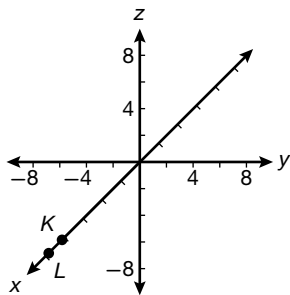
- c. Answers will vary. Sample answers: $(4, 4, -1)$ and $(3, 1, 1)$
- d. No. The line connecting the first two points is defined by the equation $(x, y, z) = (4, 7, 2) + t(-3, 5, 11)$. The solution to $-11 = 4 - 3t$ and $32 = 7 + 5t$ is $t = 5$, but the solution to $60 = 2 + 11t$ is not $t = 5$.

Practice 108

- $G(4, 0, 3)$ and $K(-5, 1, 0)$
- $8x = 2(2x + 3); x = 1.5$
- The triangle was rotated about the origin by 270° because when you multiply the triangle matrix by the reflection matrix, $\begin{bmatrix} 0 & 1 \\ -1 & 0 \end{bmatrix}$ the result is the image matrix.
- 18 inches
- 74.4 cm
- The slope between $(3, -1)$ and $(7, 1)$ is 0.5 from the slope formula. The slope between $(-2, 4)$ and $(0, 0)$ is -2 . Since perpendicular lines have opposite reciprocal slopes, and -2 is the opposite reciprocal of 0.5, these two lines are perpendicular.
- Let x represent the length of a secant segment and y , the length of the tangent segment. Since the two secant segments are the same length, we would need to solve $y^2 = (2x)(x)$. To solve, we need to take the square root, so $\sqrt{2}x$ gives the length of the tangent segment.
- Find the coordinates of the center of each circle; if they are the same, then the circles are concentric.
- He should have shaded the region above the line.
- approximately 2.5
- no
- 

13. 400 in^2
14. 5 cm; congruent arcs have congruent chords.
15. $9(x - 1) = 6(x + 1); x = 5$
16. $x = 11.5$

17.

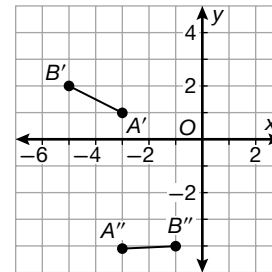


18. 267.95 in^3
19. 19.3 in^2
20. 152 units
21. To prove a quadrilateral is a parallelogram, any of the following must be known: that the quadrilateral has two pairs of parallel sides, that it has two pairs of opposite congruent sides, that two pairs of opposite congruent angles, that one pair of sides is both parallel and congruent, or that

the diagonals of the quadrilateral bisect each other.

22. 12 bites
23. 58.1
24. 139 ft
25. C

26.



27. 20.7 cm
28. $b = -3$
29. The graph is translated three units right. The matrix would be $\begin{bmatrix} 3 \\ 0 \end{bmatrix}$.

30. $\sin \theta + \sin^2 \theta + \cos^2 \theta = 1.25$

$$\sin \theta + 1 = 1.25$$

$$\theta = 14.4775^\circ$$

Simplify.

Trigonometric Identity

Simplify.