

**Warm Up 118**

1. origin
2.  $\begin{bmatrix} 0 & 4 \\ 3 & 1 \end{bmatrix}$
3. A

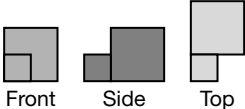
**Lesson Practice 118**

- a. 6
- b. 9
- c. 24 square units
- d. 8575 square feet

## Practice 118

1. 175 square units
2. weak, negative correlation
3. 82 square yards
4. The values for  $\csc \theta$  and  $\sec \theta$  are undefined. These values approach positive infinity or negative infinity but there is no actual value when  $\sin \theta = 0$  or  $\cos \theta = 0$ , because there cannot be a zero in the denominator of a fraction.
5. 1
6. Since  $\overline{TA}$  is a diameter of the circle, the arc that subtends it has a measure of  $180^\circ$ . According to Theorem 64-1, the angle that  $\overline{TA}$  forms with the tangent is half of  $180^\circ$ , which is  $90^\circ$ . Therefore,  $\overline{TA}$  is perpendicular to the tangent.
7.  $19,352.2 \text{ cm}^3$
8. 6
9. shaded area:  

$$\pi(5)^2 - (6.25\pi - 12.5)$$

$$= (18.75\pi + 12.5)$$
10. No,  $y > -2x + 3$  is already included in the region.
11. 
12.  $x = 3$
13. circumference of inscribed circle  
 $= 10\pi\sqrt{3}$  and area  
 $= 75\pi$ ; circumference of circumscribed circle  
 $= 20\pi$  and area  $= 100\pi$
14. C
15.  $y = -\frac{1}{12}x + \frac{4}{3}$
16. 0
17.  $A = \pi\left(\frac{hR}{H}\right)^2$

18. No. Although the slope represents the trend in the data, the line does not go through the data points.
19. 38.6 ft
20.  $(x - 6)^2 + (y + 2)^2 = 25$
21.  $917.26 \text{ in}^2$
22.  $90^\circ$
23. 409.2 miles
24. 27.2 square units
25. B
26. 15 inches
27. 50 ft
28. Reena's line is a better fit, since her line has a slope that represents the data, and includes the data. Oscar's line includes the data, but the slope of his line does not represent the data well.
29. 12 square units
30. no solution