

Warm Up 110

1. dilation
2. $P = 7.67, 23 : 7.67$
3. A

Lesson Practice 110

- a. See student work.
- b. 1 inch : 55.55 feet
- c. 15.2 feet
- d. 201 miles; Each centimeter on the map represents about 84 miles.

Practice 110

1. Yvonne is correct because it also must be known if diagonals are perpendicular and/or consecutive sides are congruent to confirm it is a rhombus.
2. D
3. 2π in.
4. As long as a fixed point on the line is listed, and the direction vector is correct, there are many possible equations for a line in three dimensions. In this question, using either given point, along with the direction vector $(7, -2, 0)$ gives a correct equation.
5. 67 centimeters
6. $\begin{bmatrix} -2 & -30 \\ -9 & -15 \end{bmatrix}$
7. 39.1 cm^2
8. $(x, y, z) = (3, 1, -2) + t(3, 8, 5)$ or $(x, y, z) = (6, 9, 3) + t(3, 8, 5)$
9. 26
10. See student work; Any solution that is a dilation of a factor of k , followed by a dilation by a factor of $\frac{1}{k}$, will cause the preimage to coincide with the image.
11. 37.6
12. It does not have a line of symmetry, but it has rotational symmetry of order 2.
13. 43.2 in.
14. D
15. The point of tangency is $(-2, 4)$. The tangent line is the horizontal line $y = 4$. The radius of $\odot A$ is 2 and the radius of $\odot B$ is 4.
16. 1 cm : 11.49 miles or 1 mile : 0.09 cm

17. approximately 396 m^2
18. 5.6
19. 11.59 mph at 45° north of east
20. 54 feet
21. 35.7 cm^2
22. See student work.
23. 2.25 in.; 5.625 in.
24. No. The radii of the circles may be different, which will affect the length of the chords for a given length of an arc.
25. inscribed: $\sqrt{2}r$;
circumscribed: $2r$
26. C
27. trapezoid; $\frac{15}{2}$
28. isosceles
29. πd^2
30. Each angle measures 18° .