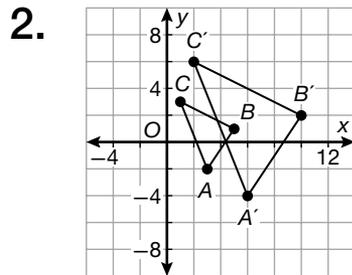


Warm Up 97

1. dilation



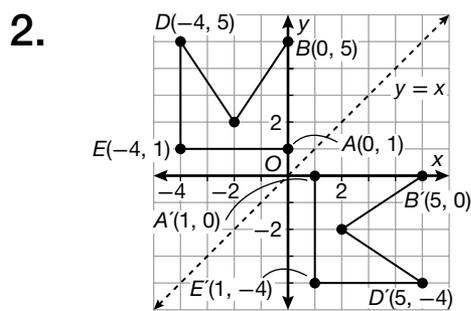
3. $(x - 3)^2 + (y + 5)^2 = 64$

Lesson Practice 97

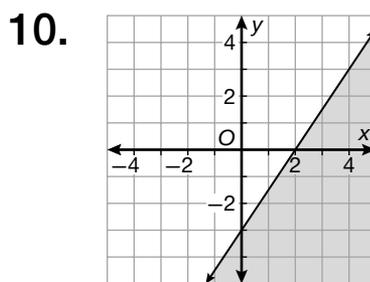
- a. No; they are coplanar, but they do not share the same center.
- b. $(x - 3)^2 + (y - 4)^2 = 4$;
 $(x - 3)^2 + (y - 4)^2 = 25$
 Both circles are coplanar and have the same center, but different radii. The larger circle is the smaller circle dilated by a scale factor of $\frac{5}{2}$.
- c. $72\pi \text{ ft}^2$
- d. $\frac{24}{49}$

Practice 97

1. He thought that the sine of an angle was the ratio of the lengths of the hypotenuse to the opposite side, instead of the other way around; the correct sine is $\frac{5}{13}$.



3. $221\pi \text{ in}^2$
4. $(x + 4)^2 + (y - 3)^2 = 1,000,000$
5. 15 lbs
6. 289 meters closer
7. $\frac{85}{121}$
8. $M'(5, 4)$, $N'(9, 0)$, and $P'(1, 0)$
9. B



11. 167 lateral surfaces
12. For four points not to form a quadrilateral, at least three must be collinear, so one point must lie on the line segment connecting two of the other points.
13. 21
14. Multiply the height by 3
15. $224\pi \text{ in}^2$
16. Taking the inverse of any function as the argument of that function will result in the argument of the inverse function; in this case, $\frac{4}{5}$.
17. $\theta_1 = 46^\circ$, $\theta_2 = 134^\circ$

18. rhombus has all side lengths equal; rectangle has slopes of adjacent sides with a product -1 ; trapezium has different slopes of all sides

19. 3600 m

20. 60 square units

21. a. Each is parallel to one pair of sides and has a magnitude equal to the length of those sides.

b. 180° ; any vertex or midpoint of any side

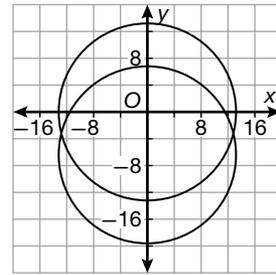
c. Any reflection flips the parallelograms so that they do not match the original parallelogram.

22. 625 m^2

23. rhombus; $4\sqrt{29}$

24. $(x - 5)^2 + (y + 4)^2 = 16$;
 $(x - 5)^2 + (y + 4)^2 = 36$;
 The circles have the same center, located at $(5, -4)$. The radius of the smaller circle is 4 and of the larger circle is 6.

25. $x^2 + (y + 6)^2 = 169$;



26. 90°

27. If Noel cannot find her shoes, she did not clean her room; false

28. $w = 14$

29. 22.5

30. If a bird is a cardinal, then it can fly.