Warm Up 75

1. radius
2. (2, 0), (0, 2), (−2, 0), and (0, −2)
3. B

Lesson Practice 75

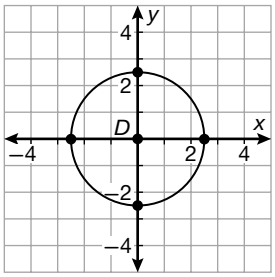
a. $PM = 3$ and $x^2 + y^2 = 9$

b. $x^2 + y^2 = 2$

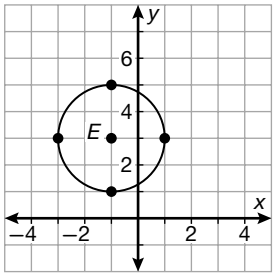
c. $(x - 2)^2 + y^2 = 16$

d. $(x - 2)^2 + y^2 = 12.25$

e.



f.



g. $(x - 47)^2 + (y - 25)^2 = 36$

Practice 75

1. $x^2 + y^2 = 16$

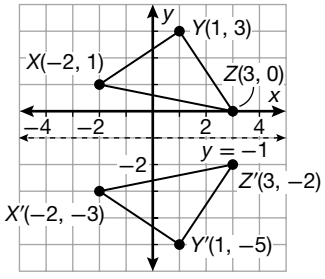
2. 3202 meters

3. C

4. 5.9

5. $\angle N$ and $\angle P$ are not a pair of base angles. They are supplementary angles. m$\angle N$ is 82°

6. 20 cubic units

7. 

8. He should make his pyramid 3 units tall.

9. 96′

10. a. increases, 0, 1

    b. cos x decreases from 1 to 0 as x increases from 0° to 90°; tan x increases from 0 to undefined (extremely large) as x increases from 0° to 90°

11. 30°

12. 1386 m^2

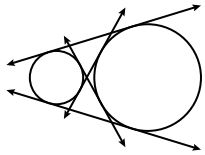
13. $(x-2)^2 + (y-4)^2 = 9$

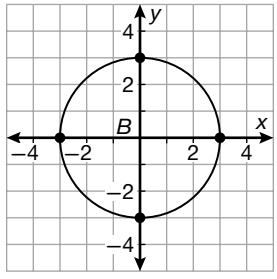
14. 6.6 inches

15. 60°

16. 5.8

17. 4 common tangents



18. 

19. slope of $f = \frac{1}{4}$, parallel to $f = \frac{1}{4}$, perpendicular to $f = -4$

20. A

21. $XY \approx 43.12$

22. 1 minute

23. $x_1 = 0$, $x_2 = 3$, and $y_2 = 3$

24. rhombus

25. either $r + s = 8$ or $|r - s| = 8$.

26. Since FD bisects $\angle EFC$, and FC bisects $\angle DFB$, by the definition of angle bisector, $\angle EFD \cong \angle DFC$ and $\angle DFC \cong \angle CFB$. By the definition of congruent angles, $m\angle EFD = m\angle DFC$ and $m\angle DFC = m\angle CFB$. By the Transitive Property of Equality, $m\angle EFD = m\angle CFB$. By the definition of congruent angles, $\angle EFD \cong \angle CFB$.

27. 34 inches, 36 inches, and 38 inches

28. 5.83

29. $A(3, 5) \rightarrow A'(6 - 3, 5) = A'(3, 5)$;
$B(1, 7) \rightarrow B'(6 - 1, 7) = B'(5, 7)$;
$C(-1, 5) \rightarrow C'(6 - (-1), 5) = C'(7, 5)$;
$D(1, 3) \rightarrow D'(6 - 1, 3) = D'(5, 3)$

30. Since $0.5 + 0.3 > 0.7$ by the Triangle Inequality Theorem, these three side lengths can form a triangle.