

ANSWERS

1. $x = 100$
2. 60°
3. $y = 9$, $m\angle KWJ = 40^\circ$,
 $m\angle BWK = m\angle JWR = 25^\circ$
4. **a)** $x = 8$, $y = 28$; **b)** $x = 21$, $y = 56$
5. 84.0 m apart

6. Yes, No, No, No, Yes
7. $x = 4\sqrt{38}$ cm ≈ 24.658 cm
8. A, C, D
9. A

10. **a)** $x = 5\sqrt{3}$ m ≈ 8.66 m,
 $y = 10\sqrt{3}$ m ≈ 17.32 m
b) $x = 8\sqrt{3}$ m ≈ 13.86 m, $y = 8$ m
c) $x = 3\sqrt{2}$ m ≈ 4.24 m, $y = 3$ m
d) $\theta = 53^\circ$ **e)** $x = 66^\circ$ **f)** $\theta = 9^\circ$

11. **a)** $\theta = 48.19^\circ \approx 48^\circ$ **b)** $x = 13.77$ units
c) $\theta = 49.96^\circ \approx 50^\circ$
12. 42°
13. 50°
14. 52°

15. A & C
16. $x = 4$ units, $y = 10$ units
17. **a)** $\triangle ADE \sim \triangle ABC$ **b)** $m = 20$ units, $n = 5$ units
18. 90 ft²

19. $x = 11.5$
20. D
21. 96 m
22. False (side lengths are proportional)
False (area is nine times the area of the original)
True
True
False (Dilated about point (6, 0))

23. $A' (-10.5, 6)$, $B' (-6, 7.5)$, $C' (-4.5, 1.5)$
24. Always True
Sometimes True
Sometimes True
25. **a)** Alternate exterior angles
b) Corresponding angles
c) Vertical angles
d) Linear Pair
e) Alternate interior angles

26. **a)** Vertical angles are congruent
b) Linear Pair
c) Alternate interior angles are congruent
d) Corresponding angles are congruent
e) Same side interior angles are supplementary
f) Alternate exterior angles are congruent
27. 120°
28. $x = 97^\circ$, $y = 96$
29. $x = 73$, $y = 41$
30. $x = 65$, $y = 108$

CORRECTIONS

- #10e: no y variable
- #16: $\triangle ABC \sim \triangle EDF$
- #17: $EC = 20$ units
- #18: $\triangle BCD \sim \triangle ABC$
- #20: all units are m