

Answer Key

Lesson 1.6

Practice Level C

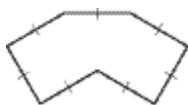
1. Yes; concave 2. No; some segments intersect more than two segments. 3. Yes; convex

4. Quadrilateral; regular; the figure is equilateral and equiangular. 5. Dodecagon; equilateral; the figure is not convex so it is not regular.

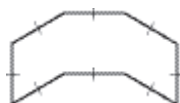
6. Octagon; equiangular; the sides are not congruent so it is not regular. 7. Heptagon; regular; the figure is equilateral and equiangular.

8. 23 m 9. 41.5 in. 10. 114.5 ft

11. Sample answer: 12. Sample answer:



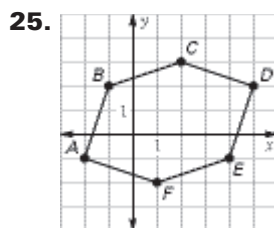
13. Sample answer: 14. Sample answer:



15. never 16. always 17. sometimes

18. never 19. 9 20. 7 21. 8 22. 4

23. 6 24. 4.5



Hexagon;

$$AB = \sqrt{(-1 - (-2))^2 + (2 - (-1))^2} = \sqrt{10},$$

$$BC = \sqrt{(2 - (-1))^2 + (3 - 2)^2} = \sqrt{10},$$

$$CD = \sqrt{(5 - 2)^2 + (2 - 3)^2} = \sqrt{10},$$

$$DE = \sqrt{(4 - 5)^2 + (-1 - 2)^2} = \sqrt{10},$$

$$EF = \sqrt{(1 - 4)^2 + (-2 - (-1))^2} = \sqrt{10},$$

$$FA = \sqrt{(-2 - 1)^2 + (-1 - (-2))^2} = \sqrt{10};$$

$$AB = BC = CD = DE = EF = FA$$

26. a. 1: 18-gon, 2: decagon, 3: heptagon,

4: quadrilateral b. 1: concave, 2: convex,

3: convex, 4: convex c. The notches allow the paper to be folded into right or straight angles with a minimal amount of overlap.