1. What is the sum of the measures of the interior angles of a pentagon?

    (A) 1080°
    (B) 720°
    (C) 540
    (D) 270°
    (E) 900°

2. How many diagonals can be drawn inside of a heptagon?

    (A) 14
    (B) 1
    (C) 7
    (D) 13
    (E) None of the above

3. Each point of a polygon at which two sides intersect is called _____.

    (A) a side
    (B) diagonal
    (C) exterior angle
    (D) a vertex
    (E) interior angle

4. Polygon C has h sides. What is the sum of the measures of polygon's C interior angles?

    (A) h(h - 3) ÷ 2
    (B) 180 (h - 2) ÷ 2
    (C) 360 (h - 2)
    (D) 90 (h - 4)
    (E) 180 (h - 2)

5. A line segment that joins two nonconsecutive vertices of a polygon is _____.

    (A) a diagonal
    (B) a side
    (C) a convex
    (D) an exterior angle
    (E) an interior angle

6. How many sides does a decagon have?

    (A) 10
    (B) 5
    (C) 6
    (D) 7
    (E) 4
    (F) 3

7. Find the measure of each exterior angle of a regular octagon?

    (A) 60°
    (B) $\left(32\dfrac{8}{11}\right)°$
    (C) $\left(51\dfrac{3}{7}\right)°$
    (D) 72°
    (E) 45°
    (F) 1260°

8. The measure of each interior angle in a polygon is 128.571428571429°. What is the name of the polygon?

    (A) octagon
    (B) heptagon
    (C) decagon
    (D) pentagon
    (E) quadrilateral

9. A _____ polygon is a polygon in which the measure of each angle is less than 180°.

   Ⓐ regular
   Ⓑ equiangular
   Ⓒ equilateral
   Ⓓ nonconvex
   Ⓔ convex

10. Polygon J has o sides. How many diagonals can be drawn inside of polygon J?

   Ⓐ $o(o - 2) \div 3$
   Ⓑ $2(o)$
   Ⓒ $o(o - 2)$
   Ⓓ $2(o - 4)$
   Ⓔ $o(o - 3) \div 2$
   Ⓕ $o(o - 2) \div 2$

11. If the measures of ten interior angles of a decagon are $(203 + 2x)°$, $(173 + x)°$, $(208 + 3x)°$, $(220 + 4x)°$, $(204 + 4x)°$, $(x + 146)°$, $(2x + 180)°$, $(3x + 214)°$, $(158 + x)°$, and $(238 + 3x)°$, what is the value of x?

12. If the measures of five interior angles of a hexagon are 142°, 139°, 99°, 115°, and 71°, what is the measure of the other interior angle?

13. If the sum of the measures of polygon is 2880°, how many sides does the polygon have?

   Ⓐ 16
   Ⓑ 11
   Ⓒ 17
   Ⓓ 18
   Ⓔ 10
   Ⓕ 22

14. Which of the following cannot represent the measure of an exterior angle of a regular polygon?

   Ⓐ 50
   Ⓑ 120
   Ⓒ 24
   Ⓓ 15
   Ⓔ 40
   Ⓕ 36

15. If the number of sides in a polygon was doubled, the sum of its interior angles would increase by 540°. How many sides does the original polygon have?

16. What is the number of sides in a regular polygon in which the measure of an interior angle is four more than twenty-one times the measure of an exterior angle?