F.2 Mathematics
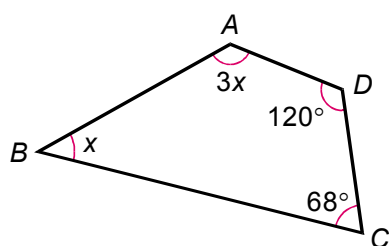**MC Exercise**
2B12 Polygons

1. Find the sum of interior angles of a regular 14-gon.
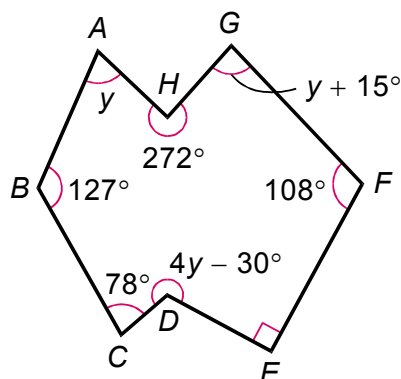
   A. 180°

   B. 360°

   C. 2 160°

   D. 2 520°

2. Find x in the figure.

   A. 38°

   B. 43°

   C. 48°

   D. 53°

3. Find y in the figure.

   A. 60°

   B. 65°

   C. 70°

   D. 85°

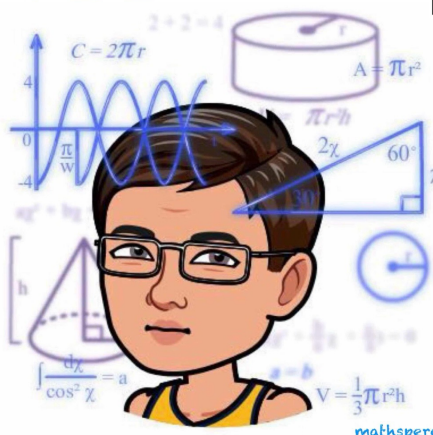4. Find the size of an interior angle of a regular 12-gon.

   A. 150°

   B. 160°

   C. 170°

   D. 180°

5. If the sum of interior angles of a polygon is 3 060°, find the number of sides of the polygon.
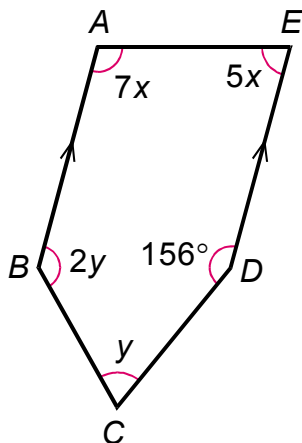
   A. 13

   B. 15

   C. 17

   D. 19

6. If the size of an interior angle of a regular polygon is 156°, find the number of sides of the regular polygon.
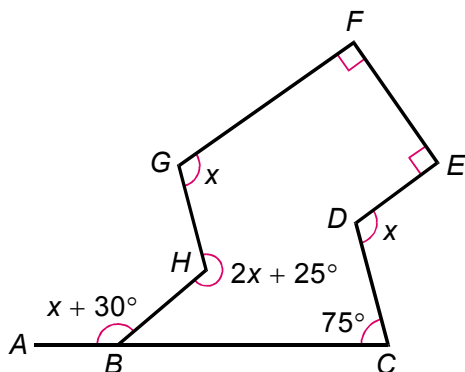
   A. 11

   B. 13

   C. 15

   D. 17

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7. Find x and y in the figure.

A. $x = 15°$, $y = 68°$

B. $x = 16°$, $y = 64°$

C. $x = 30°$, $y = 60°$

D. $x = 68°$, $y = 15°$

8. In the figure, ABC is a straight line. Find $\angle ABH$.

A. 94°

B. 110°

C. 124°

D. 140°

9. An octagon has three equal interior angles, and the sum of the other five interior angles is 360°. Find the size of each of the three equal interior angles.
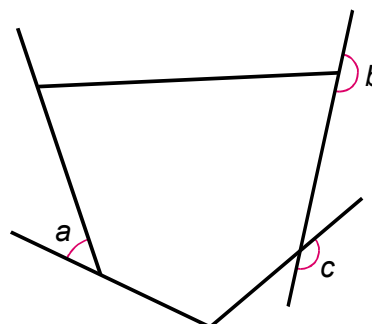
A. 90°

B. 144°

C. 216°

D. 240°

10. The sizes of interior angles of a heptagon are in the ratio of $2 : 2 : 4 : 5 : 7 : 7 : 9$. Find the size of the largest interior angle.

A. 25°

B. 50°

C. 225°

D. 315°

11. If the sum of interior angles of an n-gon is 180° less than that of a pentagon, find the value of n.

A. 3

B. 4

C. 6

D. 7

12. In the figure, which of the following is / are the exterior angle(s) of the polygon?

I. a

II. b

III. c

A. I only

B. II only

C. I and II only

D. II and III only

13. Find the size of an exterior angle of a regular nonagon.

    A.   20°

    B.   40°

    C.   180°

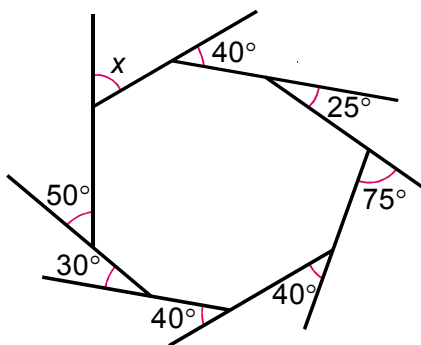   D.   360°

14. If the size of an exterior angle of a regular polygon is 18°, find the number of sides of the regular polygon.

    A.   10

    B.   18

    C.   20

    D.   22

15. If the size of an interior angle of a regular polygon is 140°, find the number of sides of the regular polygon.
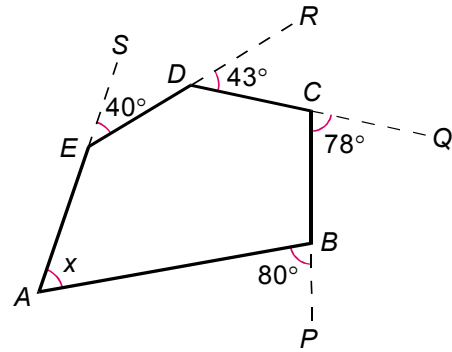
    A.   6

    B.   7

    C.   8

    D.   9

16. Find x in the figure.

    A.   30°

    B.   45°

    C.   50°

    D.   60°

17. In the figure, all dotted lines are produced from the solid lines. Find x.

    A.   61°

    B.   81°

    C.   99°

    D.   119°

18. If the exterior angles of a convex pentagon are x, $2x$, $4x$, $6x$ and $12x$, find the size of the largest exterior angle.

    A.   57.6°

    B.   86.4°
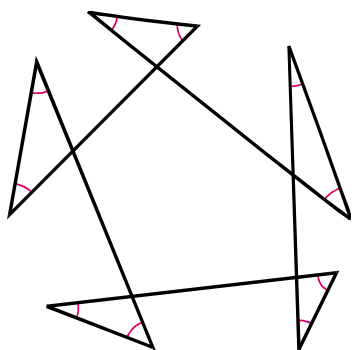
    C.   158.4°

    D.   172.8°

19. If the sum of interior angles of an n sided polygon is 8 times its sum of exterior angles, find the value of n.

    A.   10

    B.   16

    C.   18

    D.   20

20. If 10 times an exterior angle of a regular polygon is 70° less than its interior angle, find the number of sides of the regular polygon.

    A.   30

    B.   32

    C.   34

    D.   36

21. Find the sum of all marked angles in the figure.

  A. 180°

  B. 360°

  C. 540°

  D. 720°

22. Which of the following cannot tessellate?

  A. Equilateral triangles

  B. Squares

  C. Regular hexagons

  D. Regular 12-gons