PRACTICE – Polygons

Name_____ Block_____

Determine the sum of the interior angles of each polygon.

1. Heptagon
2. Decagon
3. 23-gon

Identify the polygon given the sum of its interior angles.

4. 5580°
5. 1260°
6. 1980°

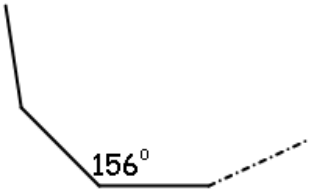
Solve each problem using your knowledge of interior and exterior angles of polygons.

7. Each interior angle in a regular polygon is 120°. How many sides does the polygon have?

8. What is the measure of each exterior angle of an octagon?

9. What is the sum of the exterior angles of a heptagon?

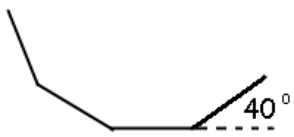
10. How many sides does the following regular polygon have?



11. The sum of interior angles of a regular polygon is 2880°. What is the measure of each interior angle?

12. What is the sum of the interior angles of a 15-gon?

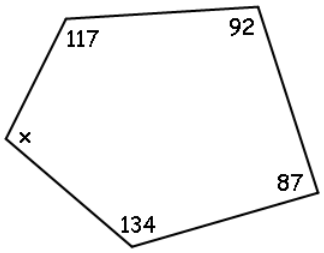
13. How many sides does the following regular polygon have?



14. What is the measure of each exterior Angle in an 18-gon?

Solve for x in each problem.

15.



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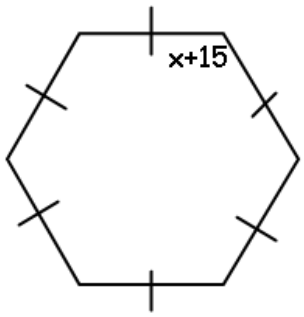

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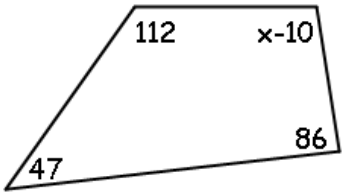

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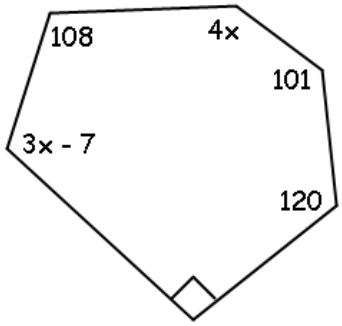

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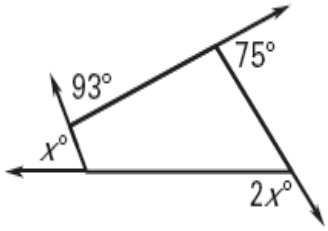

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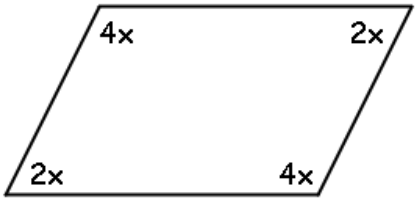

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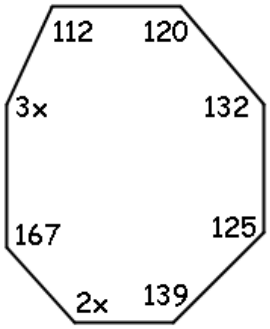

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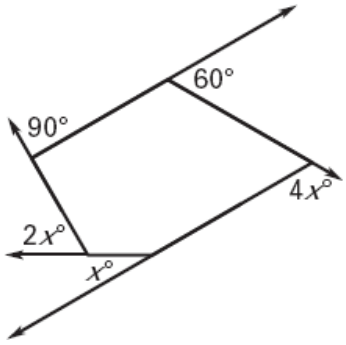


PRACTICE – Polygons

Name_____ANSWERS_____ Block_____

Determine the sum of the interior angles of each polygon.

1. Heptagon

   900°

2. Decagon

   1440°

3. 23-gon

   3780°

Identify the polygon given the sum of its interior angles.

4. 5580°

   33-gon

5. 1260°

   Nonagon (9)

6. 1980°

   13-gon

Solve each problem using your knowledge of interior and exterior angles of polygons.

7. Each interior angle in a regular polygon is 120°. How many sides does the polygon have?

   180 – 20 → 60
   360/60 → 6 sides

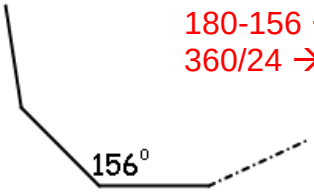
8. What is the measure of each exterior angle of an octagon?

   360/8 → 45°

9. What is the sum of the exterior angles of a heptagon?

   360°

10. How many sides does the following regular polygon have?

    180-156 → 24
    360/24 →15 sides

11. The sum of interior angles of a regular polygon is 2880°. What is the measure of each interior angle?

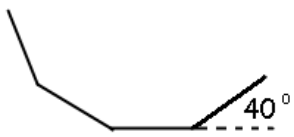
    2880 = (n-2)180
    N=18

    2880/18 → 160°

12. What is the sum of the interior angles of a 15-gon?

    2340°

13. How many sides does the following regular polygon have?

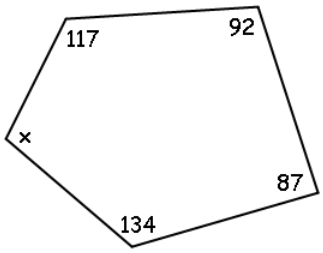
    360/40 →9 sides

14. What is the measure of each exterior Angle in an 18-gon?

    360/18 → 20°

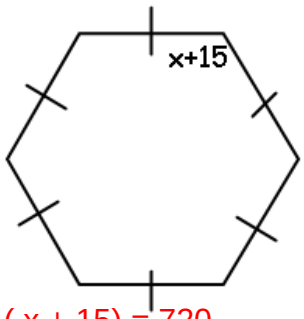
Solve for x in each problem.

15.



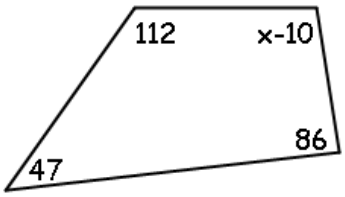
X + 430 = 540
X = 110

16.



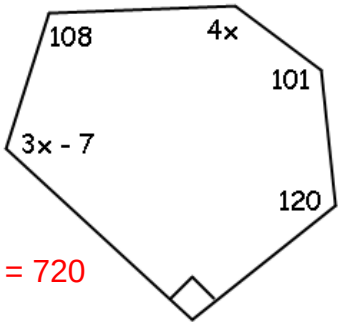
6 (x + 15) = 720
x = 105

17.



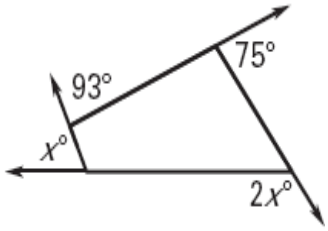
X + 235 = 360
X = 125

18.



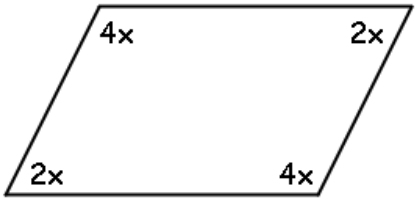
7x + 412 = 720
x = 44

19.



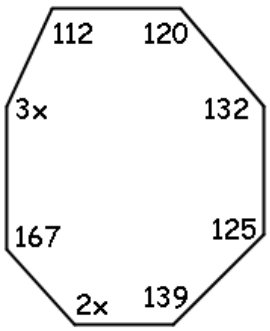
3x + 168 = 360
X = 64

20.



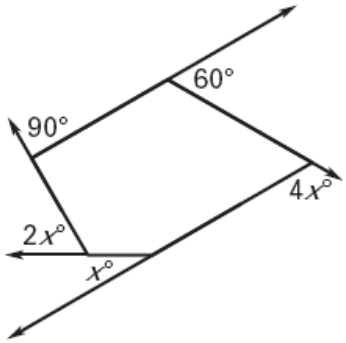
12x = 360
x = 30

21.



5x + 795 = 1080
X = 57

22.



7x + 150 = 360
x = 30