

Answer each question...

1. What is the sum of the interior angles of an Octagon?

$$1080^\circ$$

3. What is the sum of the interior angles of a Dodecagon? (12sides)

$$10(180^\circ) = 1800^\circ$$

5. What is the sum of the interior angles of a 13-gon?

$$11(180) = 1980^\circ$$

7. What is the sum of the interior angles of a quadrilateral?

$$2(180^\circ) = 360^\circ$$

2. What is the sum of the interior angles of a Decagon?

$$8(180) = 1440^\circ$$

4. What is the sum of the interior angles of a Nonagon? (9sides)

$$1260^\circ$$

6. What is the sum of the interior angles of a 19-gon?

$$17(180) = 3060^\circ$$

8. What is the sum of the interior angles of a Heptagon? (7sides)

$$5(180) = 900^\circ$$

Bubble all the correct answers from above. Don't bubble incorrect answers.

1,980 360 1,220 1,350 900 3,060 1,280 1,260 1,880 1,540 1,080 1,440 1,800 720

Answer each question...

9. What is the measure of one interior angle of a regular Octagon?

$$\frac{1080}{8} = 135^\circ$$

11. What is the measure of one interior angle of a regular quadrilateral? What other name is there for a regular quadrilateral?

$$90^\circ \text{ - square}$$

13. What is the measure of one interior angle of a regular Decagon?

$$\frac{1440^\circ}{10} = 144^\circ$$

15. What is the measure of one interior angle of a regular 11-gon? $9(180^\circ) + 620^\circ$

$$\frac{1620^\circ}{11} = 147.27^\circ$$

10. What is the measure of one interior angle of a regular Nonagon?

$$\frac{1260^\circ}{9} = 140^\circ$$

12. What is the measure of one interior angle of a regular 19-gon?

$$\frac{3060^\circ}{19} = 161.05^\circ$$

14. What is the measure of one interior angle of a regular Heptagon?

$$\frac{900^\circ}{7} = 128.57^\circ$$

16. What is the measure of one interior angle of a regular Dodecagon?

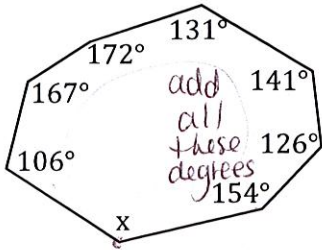
$$\frac{1800}{12} = 150^\circ$$

Bubble all the correct answers from above. Don't bubble incorrect answers.

148.93 128.57 144 135 161.05 157.69 147.27 139 140 150 160 137.93 90 70

For these.... find the missing angle or angles.

25.



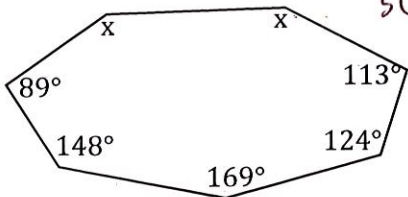
$$(8-2)180^\circ = 1080^\circ$$

total number of degrees in polygon

$$\begin{array}{r} x + 997^\circ = 1080^\circ \\ -997 \quad -997 \\ \hline \end{array}$$

$$x = 83^\circ$$

27.



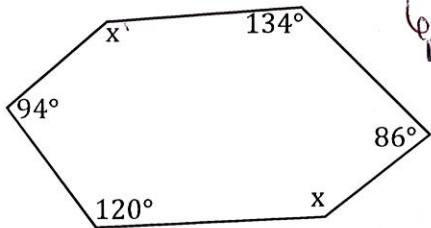
$$7-2(180^\circ) = 900^\circ$$

$$\begin{array}{r} 2x + 643 = 900 \\ -643 \quad -643 \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{257}{2}$$

$$x = 128.5$$

29.



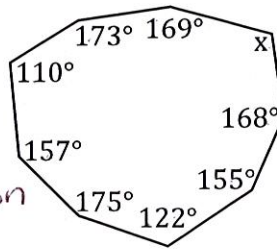
$$(6-2)(180^\circ) = 720^\circ$$

$$\begin{array}{r} 2x + 434 = 720^\circ \\ -434 \quad -434 \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{286}{2}$$

$$x = 143^\circ$$

26.

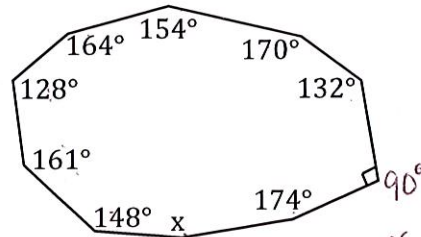


$$9-2(180^\circ) = 1260$$

$$\begin{array}{r} x + 1229 = 1260 \\ -1229 \quad -1229 \\ \hline \end{array}$$

$$x = 31^\circ$$

28.

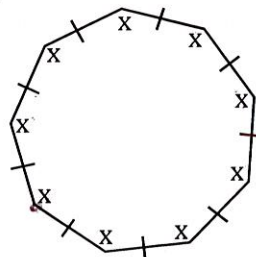


$$(10-2)(180^\circ) = 1440$$

$$\begin{array}{r} x + 1321 = 1440 \\ -1321 \quad -1321 \\ \hline \end{array}$$

$$x = 119$$

30.



$$(9-2)180^\circ = 1260^\circ$$

$$\frac{9x}{9} = \frac{1260^\circ}{9}$$

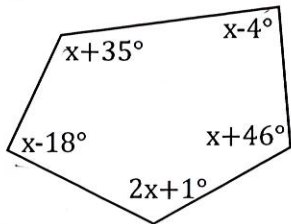
$$x = 140^\circ$$

Bubble all the correct answers from above. Don't bubble incorrect answers.

- 324.59
 84
 44.3
 143
 128.5
 119
 168
 140
 83
 31

For these... solve for x.

31.



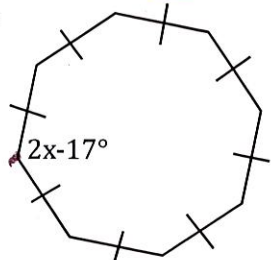
5 sides
 $(5-2)(180^\circ)$
 $3(180^\circ) = 540^\circ$
 total degrees

Add all up.
 $(x-18) + (2x+1) + (x+46) + (x-4) + (x+35) = 540^\circ$

$$\begin{array}{r} 6x + 60 = 540^\circ \\ -60 \quad -60 \\ \hline 6x = 480^\circ \\ \hline x = 80^\circ \end{array}$$

$x = 80^\circ$

33.



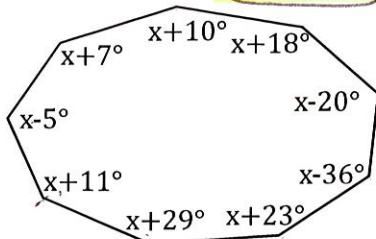
8 sides
 $(8-2)180^\circ$
 $6(180^\circ) = 1080^\circ$
 total degrees.

$$\begin{array}{r} 8(2x-17) = 1080^\circ \\ 16x - 136 = 1080 \\ +136 \quad +136 \\ \hline 16x = 1216 \end{array}$$

$$\frac{16x}{16} = \frac{1216}{16}$$

$x = 76$

35.

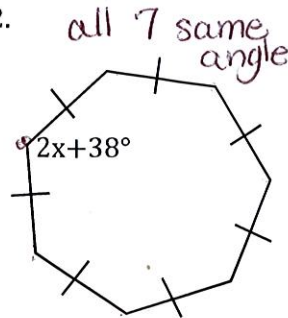


9 sides
 $(9-2)180^\circ$
 $7(180^\circ)$
 $= 1260^\circ$
 total degrees

$$\begin{array}{r} 9x + 37 = 1260^\circ \\ -37 \quad -37 \\ \hline 9x = 1223^\circ \\ \hline x = 135.89 \end{array}$$

$x = 135.89$

32.



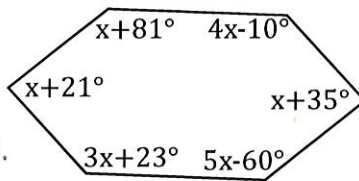
$$(7-2)(180^\circ) = 5(180^\circ) = 900^\circ$$

$$\begin{array}{r} 7(2x+38) = 900^\circ \\ 14x + 266 = 900 \\ -266 \quad -266 \\ \hline 14x = 634 \end{array}$$

$$14x = 634$$

$x = 45.29$

34.



n=6
 $(n-2)180^\circ$
 $(6-2)180$
 $4*180$
 720°

$$x+81+4x-10+x+35+5x-60+3x+23+x+21 = 720^\circ$$

$$15x + 90 = 720^\circ$$

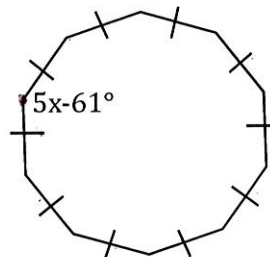
$$-90 \quad -90$$

$$15x = 630^\circ$$

$$\frac{15x}{15} = \frac{630}{15}$$

$x = 42^\circ$

36.



$$10-2(180^\circ)$$

$$8(180^\circ) = 1440^\circ$$

10 sides = 10 angles
 each angle $5x-61^\circ$
 $10(5x-61) = 1440^\circ$

$$\begin{array}{r} 50x - 610 = 1440 \\ +610 \quad +610 \\ \hline 50x = 2050 \end{array}$$

$$\frac{50x}{50} = \frac{2050}{50}$$

$x = 41^\circ$

Bubble all the correct answers from above. Don't bubble incorrect answers.

- 113 45.29 47.32 41 135.89 47 42 76 123.5 110