

1. Find the sum of the measures of the interior angles of the convex polygon.

Heptagon = _____

Decagon = _____

20-gon = _____

37-gon = _____

2. Find the measure of each interior and exterior angle in the regular polygon.

45-gon: Interior = _____, Exterior = _____

Octagon: Interior = _____, Exterior = _____

3. Given that 120° is the measure of an interior angle of a regular polygon,

the number of sides = _____

4. Given hexagon $ABCDEF$, find the value of $x =$ _____
and the measure of each angle:

$m\angle A =$ _____

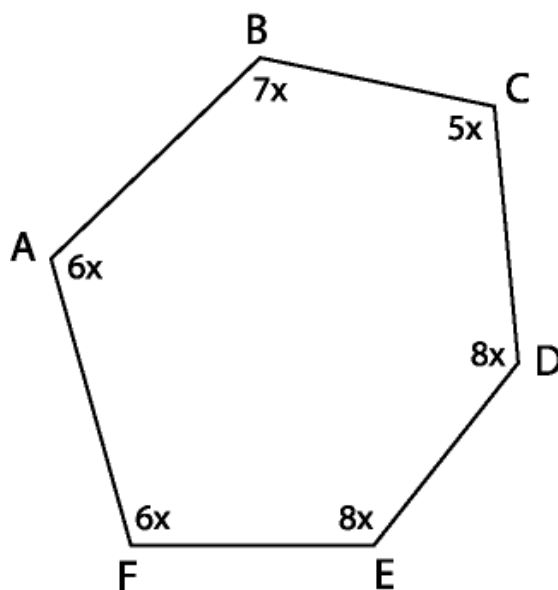
$m\angle B =$ _____

$m\angle C =$ _____

$m\angle D =$ _____

$m\angle E =$ _____

$m\angle F =$ _____

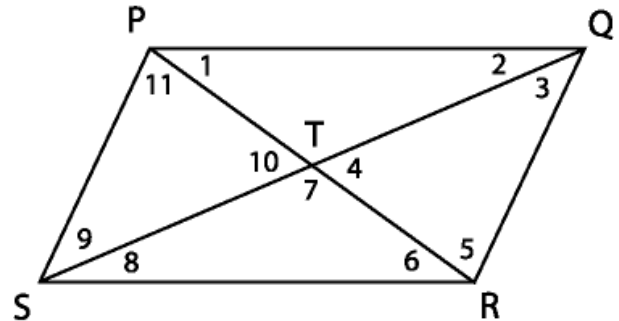


5. Given that 6° is the measure of an exterior angle of a regular polygon,

the number of sides of the polygon = _____

For the following problems, use the associated figure to answer questions about each quadrilateral.

PQRS is a parallelogram. Find the unknown measure(s).



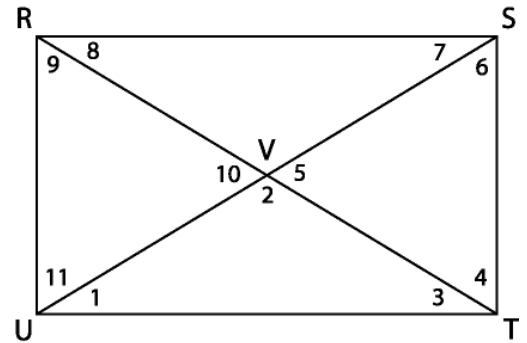
6. If $m\angle 2 = 25^\circ$ and $m\angle 9 = 48^\circ$, then $m\angle SPQ =$ _____

7. If $PQ = 7x - 3$ and $SR = 5x + 5$, then $PQ =$ _____

8. If $ST = 8$, then $SQ =$ _____

9. If $m\angle PSR = 75^\circ$, then $m\angle PQR =$ _____, $m\angle QRS =$ _____

***RSTU* is a rectangle. Find the unknown measure(s).**



10. If $m\angle 1 = 9x - 3$ and $m\angle 3 = 7x + 5$, then $m\angle 3 =$ _____

11. If $RV = 4x + 1$ and $RT = 10x - 2$, then $RT =$ _____

12. If $m\angle 11 = 11x + 4$ and $m\angle 7 = 6x + 1$, then $m\angle 7 =$ _____

13. If $m\angle 4 = 54^\circ$, then $m\angle 5 =$ _____ and $m\angle 2 =$ _____

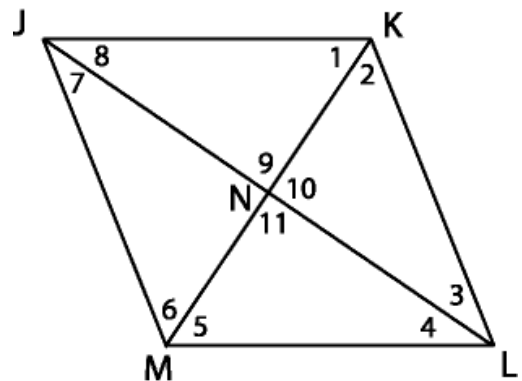
***JKLM* is a rhombus. Find the unknown measure(s).**

14. If $MN = 6x - 5$ and $NK = 4x + 1$, then $MN =$ _____

15. If $m\angle 10 = 7x - 8$, then $x =$ _____

16. If $m\angle 6 = 52^\circ$, then $m\angle JKL =$ _____

17. If $KL = 13$, then $ML =$ _____, $JM =$ _____, $JK =$ _____



***ABCD* is a square. Find the unknown measure(s).**

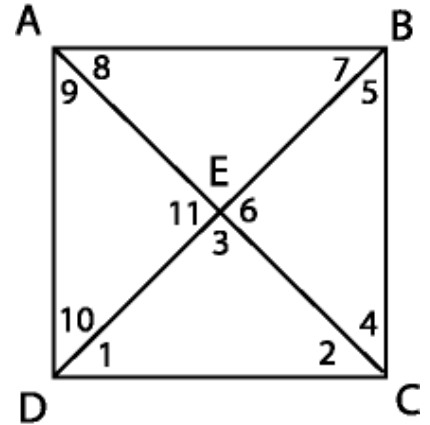
18. If $AB = 5x + 1$ and $BC = 8x - 11$, then

$AB = \underline{\hspace{2cm}}$, $BC = \underline{\hspace{2cm}}$, $CD = \underline{\hspace{2cm}}$, $AD = \underline{\hspace{2cm}}$

19. If $m\angle 3 = 8x + 2$, then $x = \underline{\hspace{2cm}}$

20. If $AE = 19$, then $DB = \underline{\hspace{2cm}}$

21. $m\angle 1 = \underline{\hspace{2cm}}$



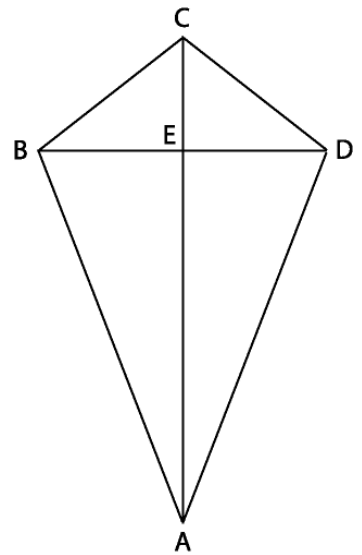
***ABCD* is a kite. Find the unknown measure.**

22. If $AB = 8x - 2$, and $AD = 6x + 4$, then $AD = \underline{\hspace{2cm}}$

23. If $m\angle CED = 7x + 6$, then $x = \underline{\hspace{2cm}}$

24. If $m\angle ABC = 12x + 10$ and $m\angle ADC = 15x - 14$, then $m\angle ADC = \underline{\hspace{2cm}}$

25. If $m\angle BAC = 24^\circ$, then $m\angle DAC = \underline{\hspace{2cm}}$



Answers to Unit 8 Review -

1. 900°
2. Int: 172° Ext: 8°
3. 6
4. $x = 18$, $m\angle A = 108^\circ$, $m\angle B = 126^\circ$
 $m\angle C = 90^\circ$, $m\angle D = 144^\circ$,
 $m\angle E = 144^\circ$, $m\angle F = 108^\circ$
5. 60
6. 107°
7. 25
8. 16
9. 75° , 105°
10. 33°
11. 18
12. 31°
13. 72° , 108°
14. 26
15. 14
16. 104°
17. 13
18. 21
19. 11
20. 38
21. 45°
22. 17
23. 10
24. 7
25. 43° , 43° , 137°
26. 22
27. 12
28. 106°
29. 24°