

Some important terms/concepts to know/remember:

- Complementary
- Supplementary
- Alternate Interior Angles
- Alternate Exterior Angles
- Corresponding Angles
- Same-side Interior Angles
- Parallel Lines and Transversals
- Auxiliary Lines
- Acute, Obtuse, Right, Scalene, Isosceles, Equilateral Triangles
- Exterior Angle Theorem
- Isosceles Triangle Theorem
- Angle-Side Relationships
- Triangle Inequality Theorem

1. Identify the type of each angle (acute, right, obtuse, straight)

a) $\angle BOA =$ _____

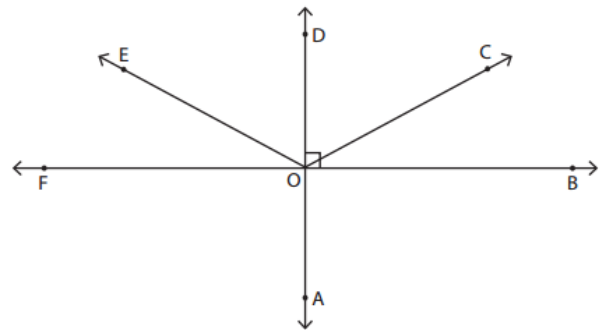
b) $\angle COF =$ _____

c) $\angle FOE =$ _____

d) $\angle AOC =$ _____

e) $\angle COD =$ _____

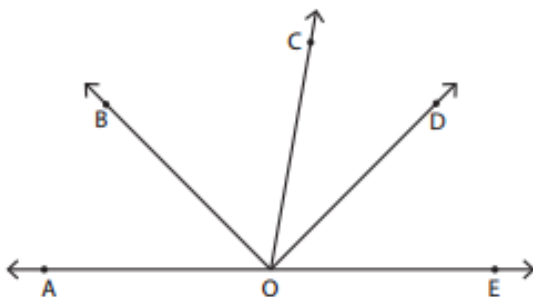
f) $\angle BOF =$ _____



2. What is the complement of a 40 degree angle? _____

3. What is the supplement of a 120 degree angle? _____

4.

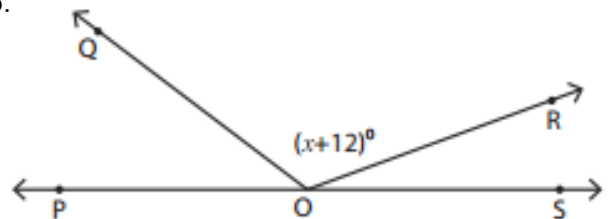


$\angle DOE = 45^\circ$

$\angle AOC = 100^\circ$

$\angle COD =$ _____

5.



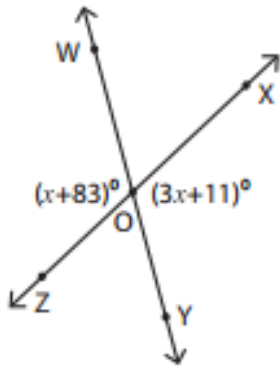
$\angle POQ = 37^\circ$

$x =$ _____

$\angle ROS = 20^\circ$

$\angle QOR =$ _____

6.

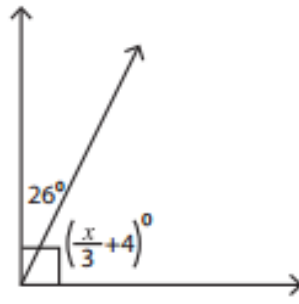


$x = \underline{\hspace{2cm}}$

$\angle XOY = \underline{\hspace{2cm}}$

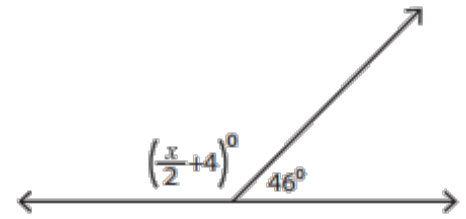
$\angle ZOY = \underline{\hspace{2cm}}$

7.



$x = \underline{\hspace{2cm}}$

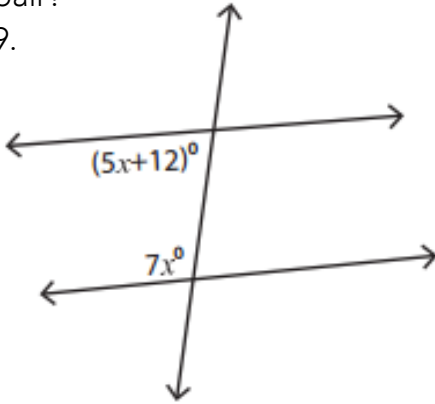
8.



$x = \underline{\hspace{2cm}}$

For questions 9-13, two parallel lines are cut by a transversal. What is the value of x and the angle pair?

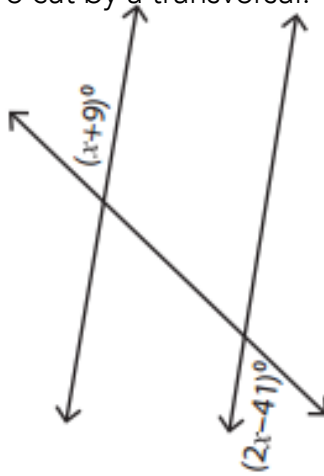
9.



$x = \underline{\hspace{2cm}}$

Angle Pair:

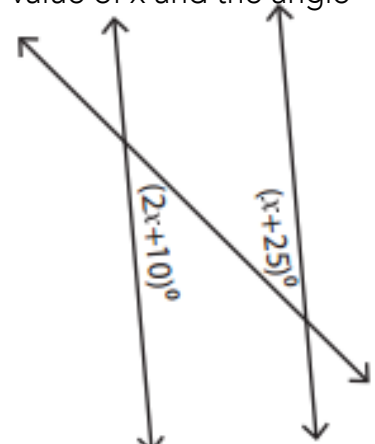
10.



$x = \underline{\hspace{2cm}}$

Angle Pair:

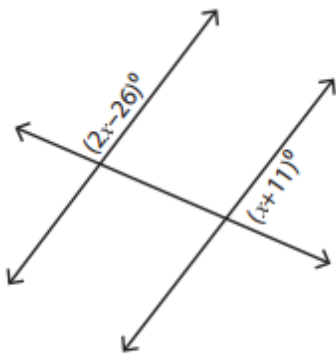
11.



$x = \underline{\hspace{2cm}}$

Angle Pair:

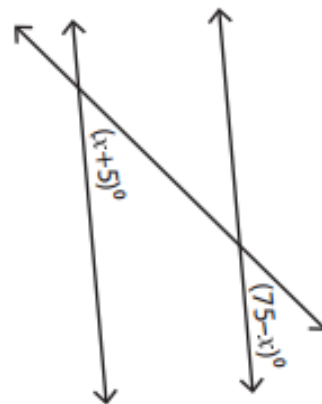
12.



$x = \underline{\hspace{2cm}}$

Angle Pair:

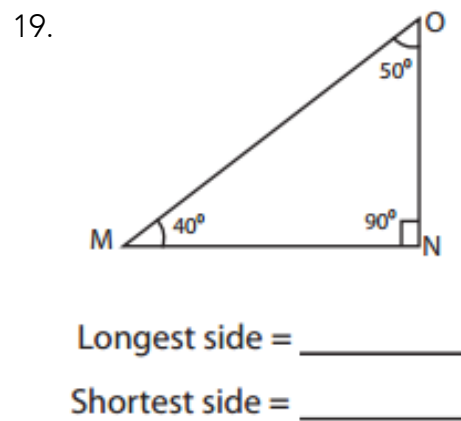
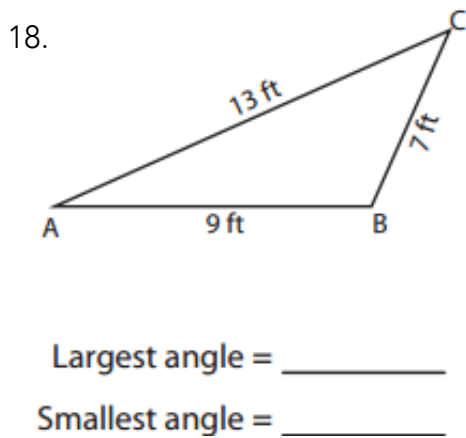
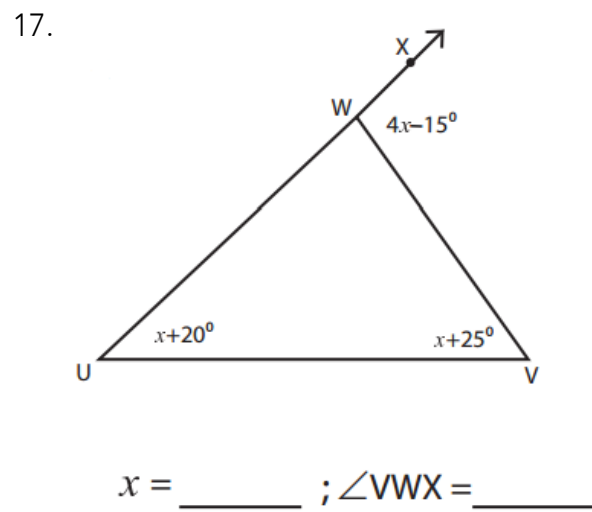
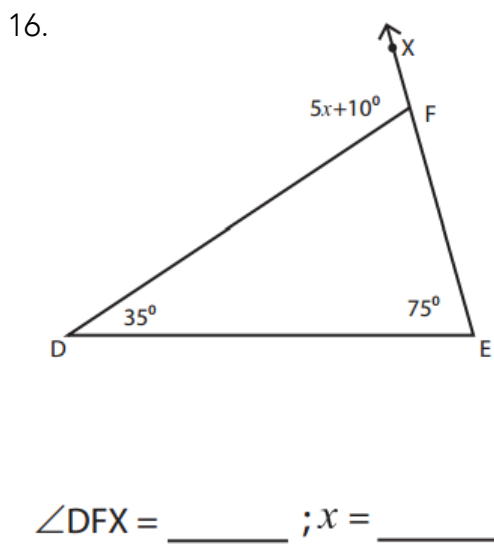
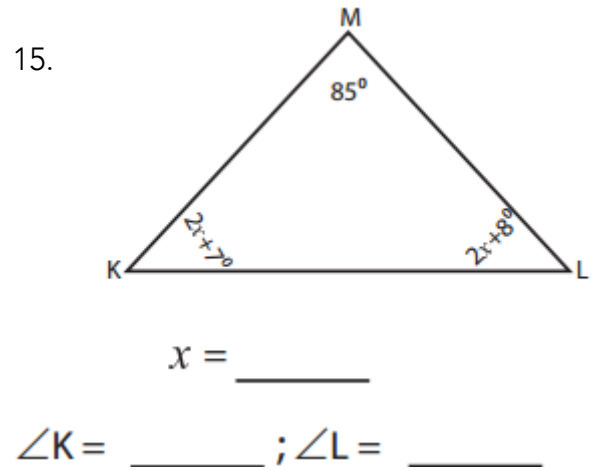
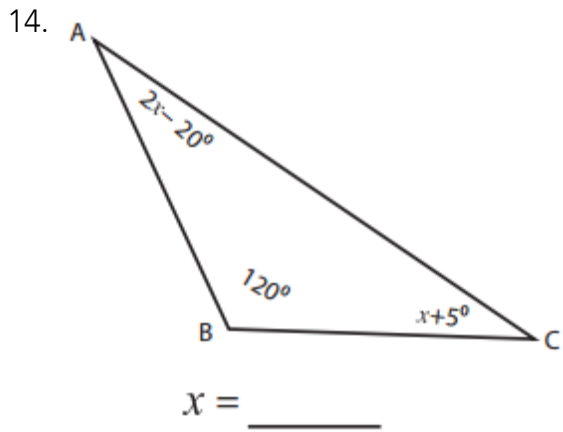
13.



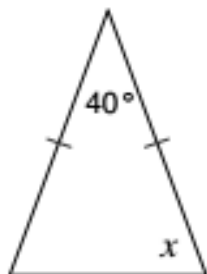
$x = \underline{\hspace{2cm}}$

Angle Pair:

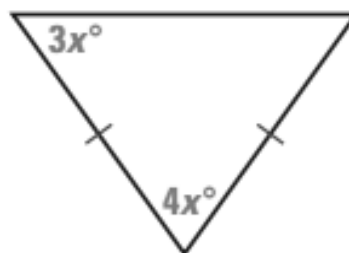
Find the missing values in each triangle:



20. Find the value of x :



21. Find the value of x :



22. Identify whether the triangle is possible or not possible given the side measures

a) $\{2, 4, 4\}$ _____ b) $\{2, 4, 6\}$ _____

c) $\{3, 7, 11\}$ _____ d) $\{5, 5, 5\}$ _____

23. In $\triangle ABC$, $m\angle A = 3x + 1$, $m\angle B = 4x - 17$, and $m\angle C = 5x - 20$. Which type of triangle is ABC?

- 1) right 2) scalene 3) isosceles 4) equilateral

24. In $\triangle ABC$, $m\angle A = x$, $m\angle B = 2x + 2$, and $m\angle C = 3x + 4$. Which type of triangle is ABC?

- 1) right 2) scalene 3) isosceles 4) equilateral

25. The measures of the angles of a triangle are in the ratio 2:3:4. In degrees, the measure of the largest angle of the triangle is

- 1) 20 2) 40 3) 80 4) 100

What kind of triangle is it? _____

26. In right triangle ABC, $m\angle C = 3y - 10$, $m\angle B = y + 40$, and $m\angle A = 90$. What type of right triangle is triangle ABC?

- 1) scalene 2) isosceles 3) equilateral 4) obtuse