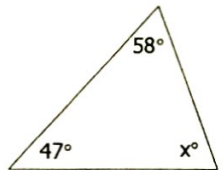


Worksheet Triangle Sum and Exterior angle Theorem

Name Key Period _____

I. Write an Equation and use it to find the value of "x".

1) $x = \underline{75}$

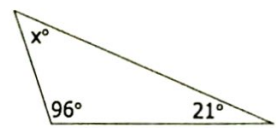


$$47 + 58 + x = 180$$

$$105 + x = 180$$

$$x = 75$$

2) $x = \underline{63}$

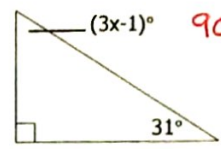


$$96 + 21 + x = 180$$

$$117 + x = 180$$

$$x = 63$$

3) $x = \underline{20}$



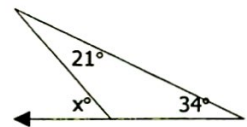
$$90 + 31 + 3x - 1 = 180$$

$$120 + 3x = 180$$

$$3x = 60$$

$$x = 20$$

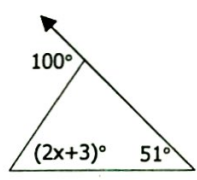
4) $x = \underline{55}$



$$21 + 34 = x$$

$$55 = x$$

5) $x = \underline{23}$



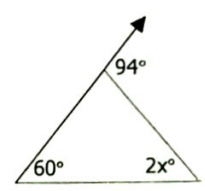
$$2x + 3 + 51 = 100$$

$$2x + 54 = 100$$

$$2x = 46$$

$$x = 23$$

6) $x = \underline{17}$

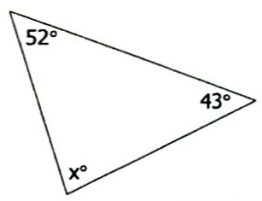


$$60 + 2x = 94$$

$$2x = 34$$

$$x = 17$$

7) $x = \underline{85}$

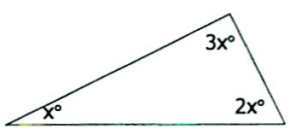


$$52 + 43 + x = 180$$

$$95 + x = 180$$

$$x = 85$$

8) $x = \underline{30}$

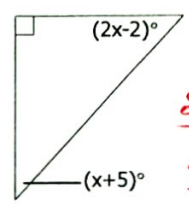


$$x + 3x + 2x = 180$$

$$6x = 180$$

$$x = 30$$

9) $x = \underline{29}$



$$2x - 2 + x + 5 + 90 = 180$$

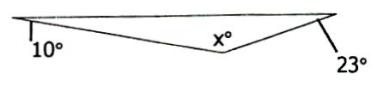
$$3x - 2 + 5 + 90 = 180$$

$$3x + 93 = 180$$

$$3x = 87$$

$$x = 29$$

10) $x = \underline{147}$

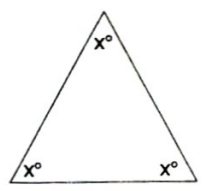


$$10 + x + 23 = 180$$

$$x + 33 = 180$$

$$x = 147$$

11) $x = \underline{60}$

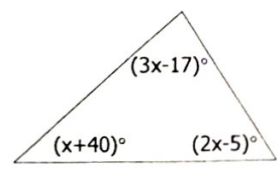


$$x + x + x = 180$$

$$3x = 180$$

$$x = 60$$

12) $x = \underline{27}$



$$x + 40 + 2x - 5 + 3x - 17 = 180$$

$$6x + 40 - 5 - 17 = 180$$

$$6x + 18 = 180$$

$$6x = 162$$

$$x = 27$$