

Geometry Worksheet

Chapter 2.3

Work the problems on a separate sheet of paper. You must show work to get credit.

1) $m\angle TRY = 4x + 12$

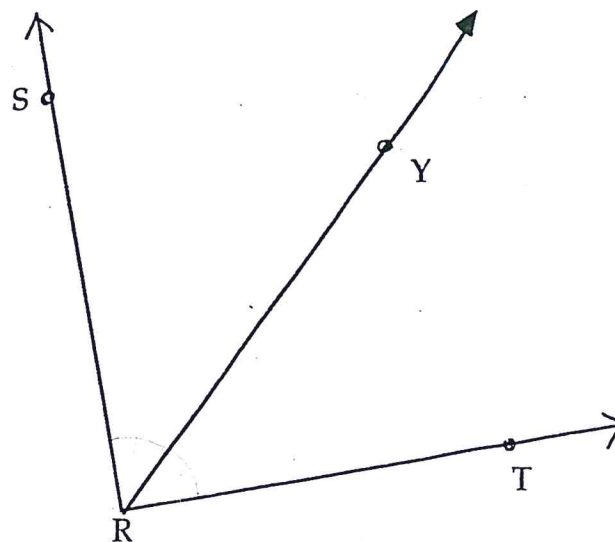
$m\angle SRY = 3x + 18$

Find the $m\angle SRT$.

2) $m\angle SRT = 58$ and $m\angle TRY = 4x - 3$. Find x .

3) $m\angle SRY = 5x + 17$ and $m\angle TRY = 8x - 10$.

Find $m\angle SRT$.



\overrightarrow{RY} is the angle bisector of $\angle SRT$

4) $LM = 6x - 5$

$MN = 5x + 8$

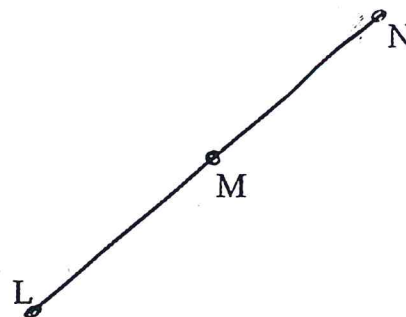
Find LN .

M is the midpoint of \overline{LN}

5) $LN = 8x - 12$

$MN = 3x + 8$

Find LM .



6) $LN = 14$ and $MN = 3x - 5$. Find x .

$$1) 4x + 12 = 3x + 18$$

$$x = 6$$

$$4(6) + 12 = 36 + 12 = 72^\circ$$

$$2) 4x - 3 = 29$$

$$4x = 32$$

$$x = 8$$

$$3) 5x + 17 = 8x - 10$$

$$27 = 3x$$

$$x = 9$$

$$5(9) + 17 = 62 + 17 = 124^\circ$$

$$4) 6x - 5 = 5x + 8$$

$$x = 13$$

$$6(13) - 5 = 78 - 5 = 73^\circ$$

$$78 - 5 = 73^\circ$$

$$5) 2(3x + 8) = 8x - 12$$

$$6x + 16 = 8x - 12$$

$$28 = 2x$$

$$x = 14$$

$$3(14) + 8$$

$$[50 \text{ units}]$$

$$6) 7 = 3x - 5$$

$$12 = 3x$$

$$x = 4$$