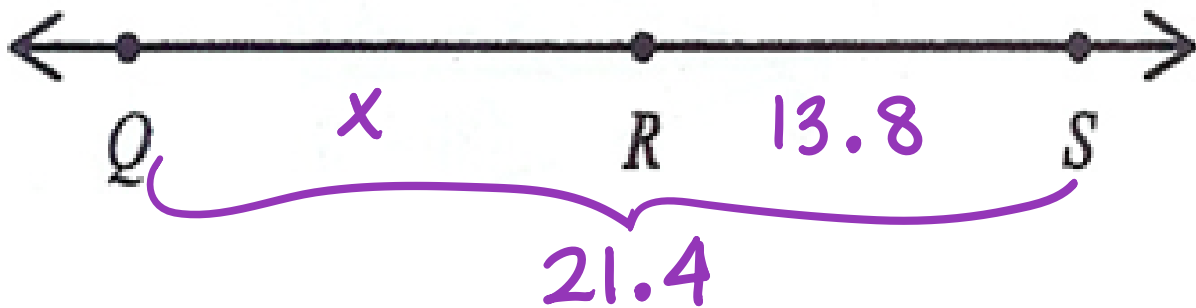


STATION 1



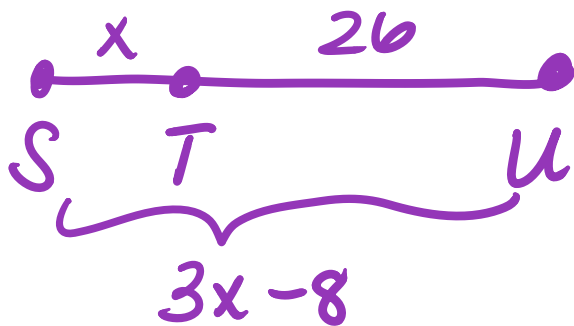
R is between Q and S. If $RS = 13.8$ and $QS = 21.4$. Find QR.

$$\begin{array}{r} x + 13.8 = 21.4 \\ -13.8 \quad -13.8 \\ \hline x = 7.6 \end{array}$$

$$QR = 7.6$$

STATION 2

T is between S and U. If $ST = x$, $TU = 26$, and $SU = 3x - 8$, find SU.

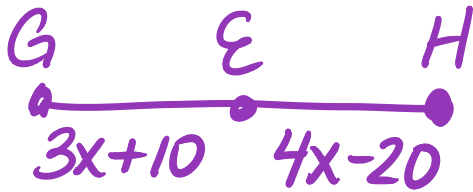


$$\begin{aligned} x + 26 &= 3x - 8 \\ 34 &= 2x \\ 17 &= x \end{aligned}$$

$$\begin{aligned} \overline{SU} &= 3(17) - 8 \\ \overline{SU} &= 43 \end{aligned}$$

STATION 3

E is the midpoint of GH. $EG = 3x + 10$ and $HE = 4x - 20$.



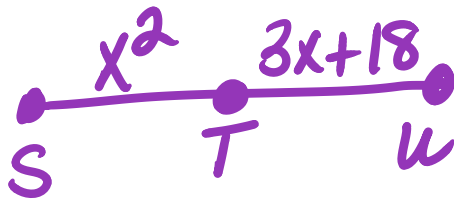
Find EG.

$$3x+10 = 4x-20$$
$$30 = x$$

$$\overline{EG} = 3(30) + 10$$
$$= 90 + 10$$
$$= 100$$

STATION 4

T is the midpoint of SU. If $ST = x^2$ and $TU = 3x + 18$ find



x.

$$x^2 = 3x + 18$$

$$x^2 - 3x - 18 = 0$$

$$(x+3)(x-6) = 0$$

$$x = -3 \quad x = 6$$

STATION 5

\overrightarrow{MK} bisects $\angle JML$.

$\angle JMK = x^2 - 7x$ and $\angle KML = 30$.

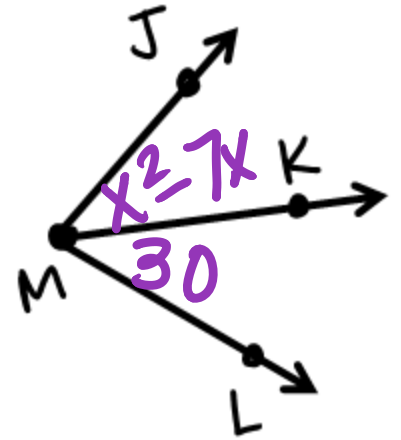
Find x .

$$x^2 - 7x = 30$$

$$x^2 - 7x - 30 = 0$$

$$(x + 3)(x - 10) = 0$$

$$x = -3 \quad x = 10$$



STATION 6

\overrightarrow{PN} bisects $\angle MPO$

$\angle MPN = 5x^2 + 28x$ and $\angle NPO = 12$ find x .

$$5x^2 + 28x = 12$$

$$5x^2 + 28x - 12 = 0$$

$$(5x + 2)(x - 6) = 0$$

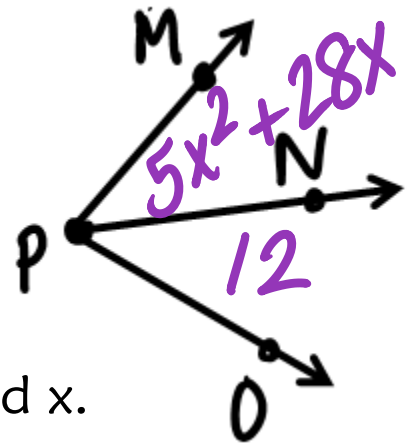
$$5x + 2 = 0$$

$$5x = -2$$

$$x = \frac{-2}{5}$$

$$x - 6 = 0$$

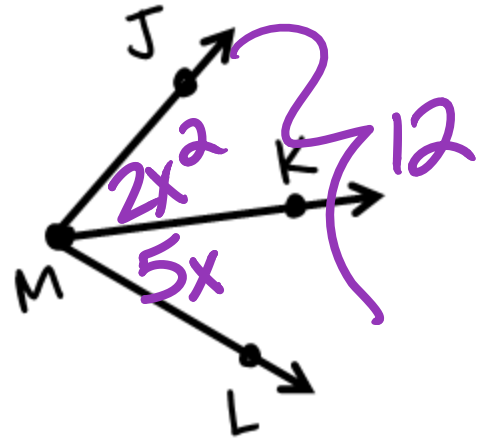
$$x = 6$$



STATION 7

$$\angle JMK = 2x^2, \angle KML = 5x, \angle JML = 12$$

Find x .



$$2x^2 + 5x = 12$$

$$2x^2 + 5x - 12 = 0$$

$$(2x - 3)(x + 4) = 0$$

$$2x - 3 = 0$$

$$2x = 3$$

$$x = \frac{3}{2}$$

$$x + 4 = 0$$

$$x = -4$$

STATION 8

$$x + 2y = 5$$

$$2x - 2y = 4$$

$$3x = 9$$

$$x = 3$$

$$x + 2y = 5$$

$$3 + 2y = 5$$

$$2y = 2$$

$$y = 1$$

$$(3, 1)$$

STATION 9

$$y = 2x + 1$$

$$3x - 2y = -12$$

$$3x - 2(2x + 1) = -12$$

$$3x - 4x - 2 = -12$$

$$-x = -10$$

$$x = 10$$

$$y = 2(10) + 1$$

$$y = 21$$

$$(10, 21)$$

STATION 10

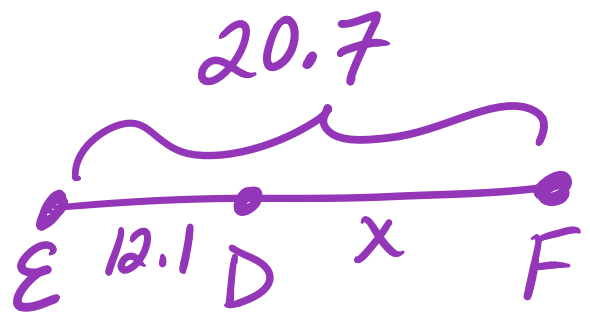
D is between E and F.

$$EF = 20.7 \text{ and } DE = 12.1$$

Find DF.

$$12.1 + x = 20.7$$

$$x = 8.6, \overline{DF} = 8.6$$



STATION 11

Sometimes, Always, Never:

S a) If M is between A and B , then M bisects AB .

A b) Two segments that have the same length must be congruent.