

- S is the midpoint of  $\overline{RT}$
- $RS = 3x+7$
- $ST = 6x+1$

$$3x+7 = 6x+1$$

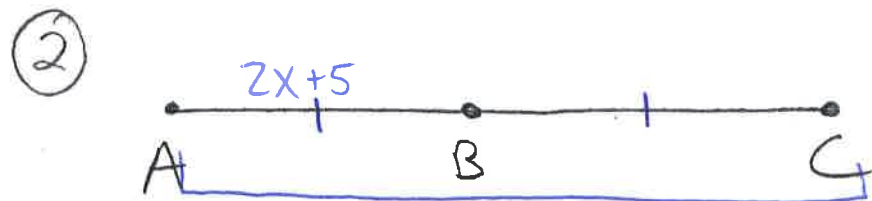
$$\begin{array}{r} -3x \quad -1 \\ \hline 6 = 3x \end{array}$$

$$6 = 3x$$

$$\boxed{2 = x}$$

Find:

$$x = \underline{2} \quad RS = \underline{13} \quad ST = \underline{13} \quad RT = \underline{26}$$



- $AB = 2x+5$
- $AC = x+31$

$$2x+5 + 2x+5 = x+31$$

$$\begin{array}{r} 4x+10 = x+31 \\ -x \quad -10 \quad -x \quad -10 \\ \hline 3x = 21 \end{array}$$

$$\boxed{x=7}$$

Find:

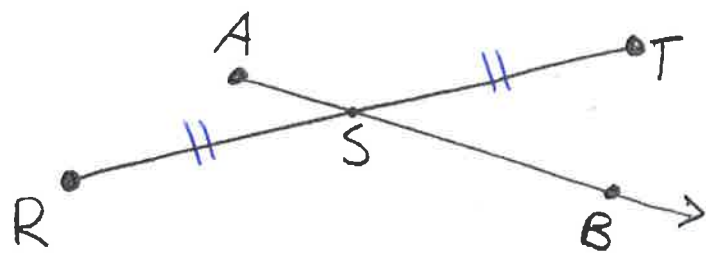
$$x = \underline{7} \quad AB = \underline{19} \quad BC = \underline{19} \quad AC = \underline{38}$$

③ What is the difference between

$\overline{AC}$ ,  $AC$ , and  $\overleftrightarrow{AC}$ ?

|  
line  
segment
|  
length  
(or distance)
|  
line

For 4, 5, and 6 use the following:



$\overrightarrow{AB}$  bisects  $\overline{RT}$  at  $S$

④  $RS = 8x - 2$

$RT = 76$

Find:

$x = \underline{5}$

$RS = \underline{38}$

$ST = \underline{38}$

$RT = \underline{76}$

$$8x - 2 + 8x - 2 = 76$$

$$16x - 4 = 76$$

$$16x = 80$$

$$x = 5$$

⑤  $RS = 12x + 17$

$ST = 7x + 62$

Find:

$x = \underline{9}$

$RS = \underline{125}$

$RT = \underline{250}$

$$12x + 17 = 7x + 62$$

$$5x = 45$$

$$x = 9$$

⑥  $AS = 3x$

$SB = 4x + 8$

$AB = 5x + 34$

$$3x + 4x + 8 = 5x + 34$$

$$7x + 8 = 5x + 34$$

$$2x = 26$$

$x = \underline{13}$

Find:  $x = \underline{13}$

$AS = \underline{39}$

$SB = \underline{60}$

$AB = \underline{99}$