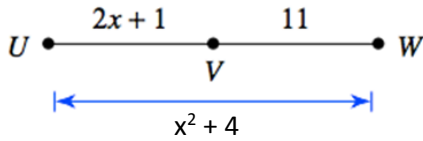


1)



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

2) Points X, Y, and Z are collinear with Y in between X and Z. Use the following information to solve for x.

$XY = 3x + 9$      $XZ = x^2 + 2x + 7$      $YZ = 4$

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

3) Find the exact length of the line segment from  $A(0, -1)$   $B(3, -4)$

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

4)  $K$  is the midpoint between  $J$  and  $L$ . Find the coordinates of  $K$ . Then find the sum of the x-coordinate and the y-coordinate.

$J(4, -2)$ ,     $L(-2, -1)$

Midpoint  $K$  \_\_\_\_\_

x-coordinate of  $K$  \_\_\_\_\_    y-coordinate of  $K$  \_\_\_\_\_

sum \_\_\_\_\_

5)  $M$  is the midpoint of segment  $NC$ . Find the missing parts. Find the sum of the missing parts.

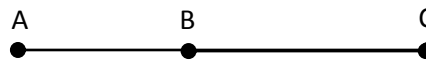
$N(-7, a)$      $M(3, 8)$      $C(b, 4)$

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

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

sum = \_\_\_\_\_

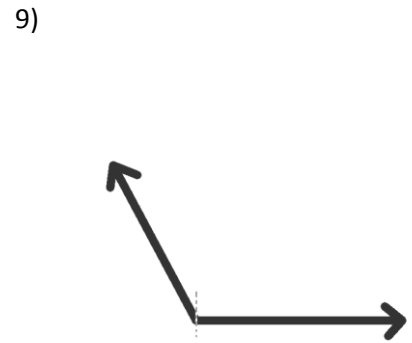
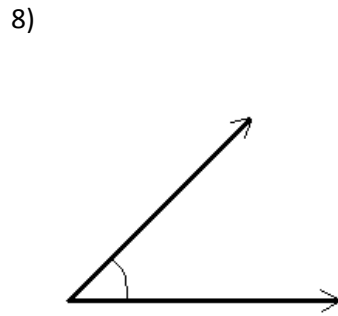
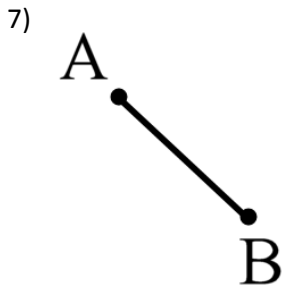
6) Use the ratio to solve for  $BC$ .



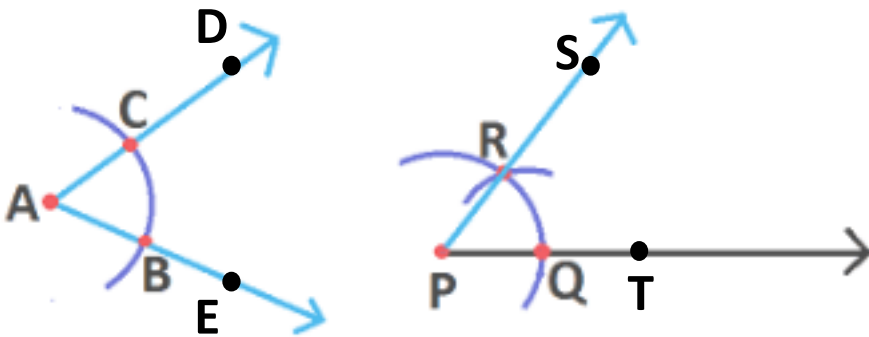
$\frac{AB}{AC} = \frac{1}{6}$  and  $AB = 2x - 7$ ,  $BC = x^2 - 14$

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

Copy the segment and angles using construction techniques. Use proper notation (prime notation) on copies.



The following diagram shows the construction of  $\angle P$  so that  $\angle A \cong \angle P$ . Use the diagram to answer questions 10 and 11.



10) Is  $\overline{AB} \cong \overline{PQ}$ ? Use proper notation and vocabulary to describe how you know.

11) Is  $\overline{AD} \cong \overline{PS}$ ? Use proper notation and vocabulary to describe how you know.