

9-3-19 6th Geo

Ch. 1 PT 2

25

$$\angle A = \angle B$$

↓

$$5n - 3 = 3n + 13$$

$$\begin{array}{r} -3n \quad -3n \\ \hline \end{array}$$

$$2n - 3 = 13$$

$$\begin{array}{r} +3 \quad +3 \\ \hline \end{array}$$

$$2n = 16$$

$$n = 8$$

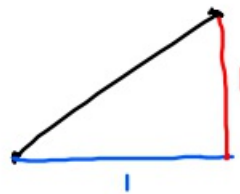
$$\angle A = 5n - 3$$

$$5 \cdot 8 - 3$$

$$37^\circ$$

10

$$\begin{array}{l} (-4, -2) \\ (-3, -1) \\ | \quad | \end{array}$$



$$leg^2 + leg^2 = hyp^2$$

$$1^2 + 1^2 = hyp^2$$

$$\sqrt{2} = \sqrt{hyp^2}$$

$$hyp \approx 1.4$$

7

$$\angle A + \angle B = 90^\circ$$

↓ ↓

$$n + 6 + 8n - 6 = 90^\circ$$

$$9n = 90^\circ$$

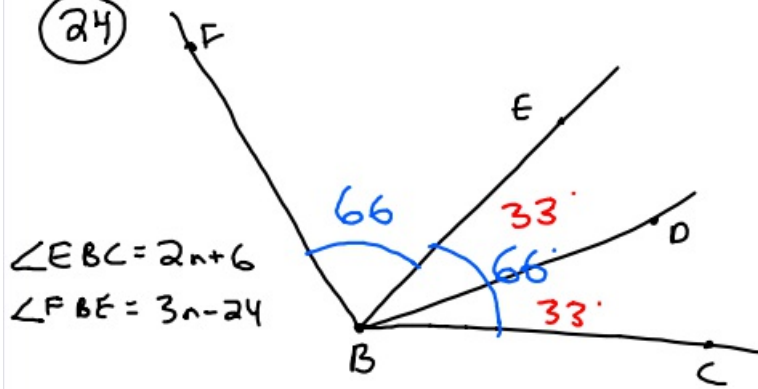
$$n = 10$$

$$\angle A = n + 6$$

$$= 10 + 6$$

$$= 16^\circ$$

(24)



$\angle EBC = 2n + 6$
 $\angle FBE = 3n - 24$

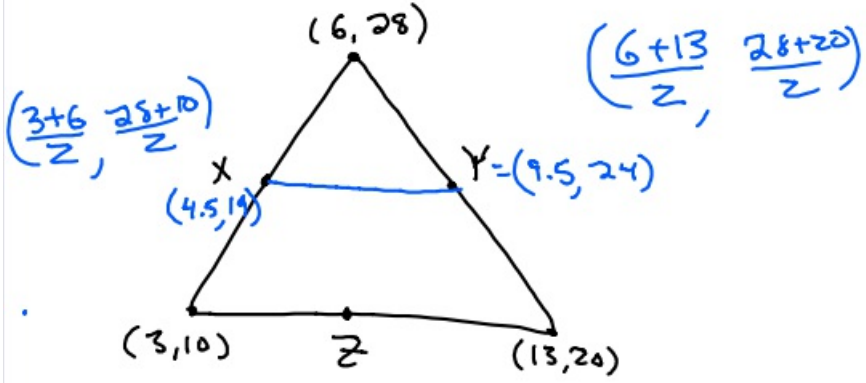
$2n + 6 = 3n - 24$

$n = 30$

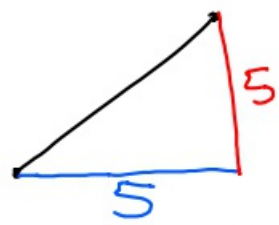
$\angle FBE = 3 \cdot 30 - 24$
 $= 66$

New

In the triangle below, X, Y, and Z are midpoints. What is XY?

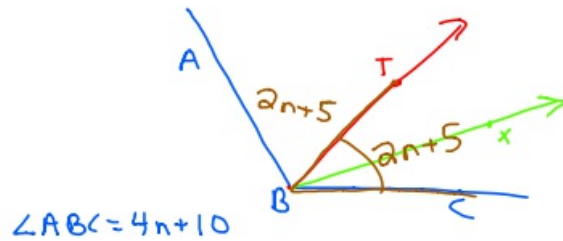


Distance between $(4.5, 19)$ and $(9.5, 24)$
 5 5



$leg^2 + leg^2 = hyp^2$
 $5^2 + 5^2 = hyp^2$
 $\sqrt{50} = \sqrt{hyp^2}$
 $hyp \approx 7.1$

- ② \vec{BT} bisects $\angle ABC$. \vec{BX} bisects $\angle TBC$. If $\angle TBC = 2n+5$, what expression represents $\angle ABC$?



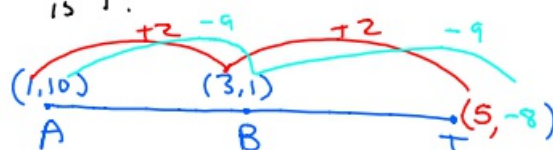
- ③ B is between A and C. If $AB = 4n+6$, $AC = 5n-1$, and $BC = 2$, what is AC?



$$\begin{aligned}
 AB + BC &= AC \\
 \downarrow \quad \downarrow \quad \downarrow \\
 4n+6 + 2 &= 5n-1 \\
 4n+8 &= 5n-1 \\
 -4n \quad -4n & \\
 \hline
 8 &= n-1 \\
 +1 \quad +1 & \\
 \hline
 9 &= n
 \end{aligned}$$

$$\begin{aligned}
 AC &= 5n-1 \\
 &= 5 \cdot 9 - 1 \\
 &= 44
 \end{aligned}$$

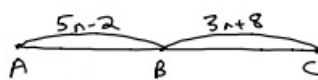
- ④ B is midpoint of \overline{AT} . If $A = (1, 10)$ and $B = (3, 1)$, where is T?



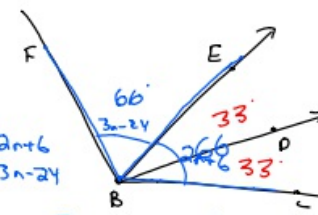
9-3-19 7th Geo

Ch. 1 PT 2

(19)


$$\begin{array}{r} 5n-2 = 3n+8 \\ -3n \quad -3n \\ \hline 2n-2 = 8 \\ +2 \quad +2 \\ \hline 2n = 10 \\ n = 5 \end{array}$$

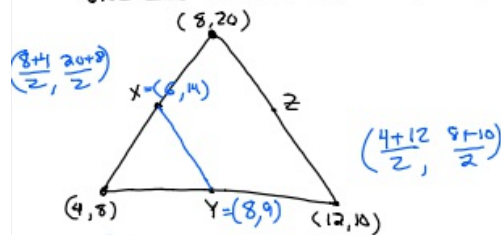
(24)


$$\begin{aligned} \angle FBE &= 2n+6 \\ \angle FBE &= 3n-24 \\ 3n-24 &= 2n+6 \\ n &= 30 \end{aligned}$$

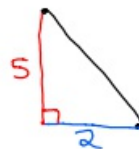
$$\begin{aligned} \angle EBC &= 2 \cdot 30 + 6 \\ &= 66 \end{aligned}$$

New

(1) X, Y, and Z are midpoints on the \triangle below. What is XY?

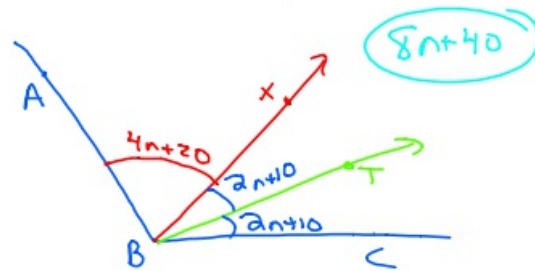


$$\begin{aligned} X &= (6, 14) \\ Y &= (8, 9) \end{aligned}$$



$$\begin{aligned} 1e_3^2 + 1e_3^2 &= hyp^2 \\ 2^2 + 5^2 &= hyp^2 \\ \sqrt{29} &= \sqrt{hyp^2} \\ hyp &= 5.4 \end{aligned}$$

- ② On $\angle ABC$, \overrightarrow{BX} bisects it.
 \overrightarrow{BT} bisects $\angle XBC$. If
 $\angle TBC = 2n + 10$, what is $\angle ABC$?



- ③ B is between A and C.
 If $AB = 6n + 10$, $AC = 8n - 1$, and
 $BC = 5$, what is AC?



$$AB + BC = AC$$

$$6n + 10 + 5 = 8n - 1$$

$$6n + 15 = 8n - 1$$

$$\begin{array}{r} -6n \quad -6n \\ \hline 15 = 2n - 1 \end{array}$$

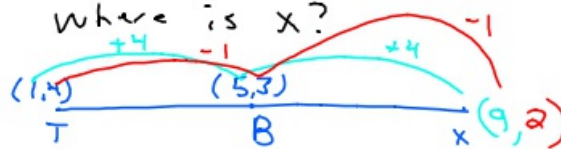
$$\begin{array}{r} +1 \quad +1 \\ \hline 16 = 2n \\ n = 8 \end{array}$$

$$AC = 8 \cdot n - 1$$

$$8 \cdot 8 - 1$$

$$63$$

- ④ B is the midpoint of \overline{TX} .
 If $T = (1, 4)$ and $B = (5, 3)$,
 where is X?



☺