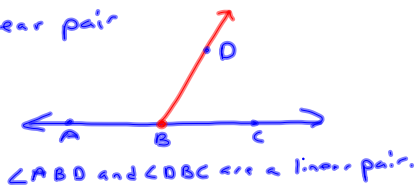


9-11-13
5th Geo

Angles continued

If I say	you do
$\angle A$ and $\angle B$ are vertical \angle 's	$\angle A = \angle B$
$\angle A$ and $\angle B$ are complementary \angle 's	$\angle A + \angle B = 90^\circ$
$\angle A$ and $\angle B$ are supplementary \angle 's	$\angle A + \angle B = 180^\circ$
$\angle A$ and $\angle B$ are a linear pair.	$\angle A + \angle B = 180^\circ$

Linear pair



$\angle A$ and $\angle B$ are vertical \angle 's.
If $\angle A = 10n - 1$ and $\angle B = 8n + 7$,
what is $m\angle A$?

$$\begin{aligned} \angle A &= \angle B \\ \downarrow \quad \downarrow \\ 10n - 1 &= 8n + 7 \\ \underline{-8n \quad -8n} & \\ 2n - 1 &= 7 \\ \underline{+1 \quad +1} & \\ 2n &= 8 \\ n &= 4 \end{aligned}$$

$\angle A = 10n - 1$
 $10 \cdot 4 - 1$
 $40 - 1$
 39°

$\angle A$ and $\angle B$ are complementary \angle 's.
If $\angle A = 7n$ and $\angle B = 3n + 10$,
what is $m\angle A$?

$$\begin{aligned} \angle A + \angle B &= 90^\circ \\ \downarrow \quad \downarrow \\ 7n + 3n + 10 &= 90^\circ \\ 10n + 10 &= 90^\circ \\ \underline{-10 \quad -10} & \\ 10n &= 80 \\ \underline{\quad \quad \quad} & \\ n &= 8 \end{aligned}$$

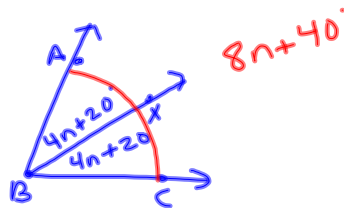
$$\begin{aligned} \angle A &= 7n \\ &= 7 \cdot 8 \\ &= 56 \end{aligned}$$

$\angle A$ and $\angle B$ are a linear pair.
 $\angle A = 6n + 10$ and $\angle B = 4n - 60$.
 What is $m\angle A$.

$$\begin{aligned} \angle A + \angle B &= 180^\circ \\ \downarrow \quad \downarrow & \\ 6n + 10 + 4n - 60 &= 180 \\ 10n - 50 &= 180 \\ \underline{\quad + 50 \quad - 50} & \\ \frac{10n}{10} &= \frac{230}{10} \\ n &= 23 \end{aligned}$$

$$\begin{aligned} \angle A &= 6n + 10 \\ &= 6 \cdot 23 + 10 \\ &= 138 + 10 \\ &= 148^\circ \end{aligned}$$

\rightarrow \overline{BX} bisects $\angle ABC$.
 If $\angle ABX = 4n + 20$, what is $\angle ABC$?



Expression Answer

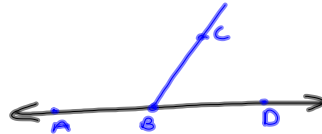
$\angle A$ and $\angle B$ are complementary angles. If $\angle B = 4n + 10$, what expression represents $\angle A$?

$$\begin{aligned} \angle A + \angle B &= 90^\circ \\ \downarrow \quad \downarrow \quad \downarrow & \\ \angle A + 4n + 10 &= 90 \\ \underline{\quad - 10 \quad - 10} & \\ \angle A + 4n &= 80 \\ \underline{\quad - 4n \quad - 4n} & \\ \angle A &= 80 - 4n \\ & \quad (-4n + 80) \end{aligned}$$

9-11-13
6th Geo

Angles Continued

I say	You write
$\angle A$ and $\angle B$ are vertical \angle 's	$\angle A = \angle B$
$\angle A$ and $\angle B$ are complementary \angle 's	$\angle A + \angle B = 90^\circ$
$\angle A$ and $\angle B$ are supplementary \angle 's	$\angle A + \angle B = 180^\circ$
$\angle A$ and $\angle B$ are a linear pair	$\angle A + \angle B = 180^\circ$



$\angle ABC$ and $\angle DBC$ are a linear pair.

$\angle A$ and $\angle B$ are vertical \angle 's.
If $\angle A = 4n + 10$ and $\angle B = n + 19$
what is $m\angle A$?

$$\begin{aligned}\angle A &= \angle B \\ \downarrow \\ 4n + 10 &= n + 19 \\ \underline{-n \quad -n} & \\ 3n + 10 &= 19 \\ \underline{-10 \quad -10} & \\ \frac{3n}{3} &= \frac{9}{3} \\ n &= 3\end{aligned}$$

$$\begin{aligned}\angle A &= 4n + 10 \\ &= 4 \cdot 3 + 10 \\ &= 12 + 10 \\ &= 22\end{aligned}$$

$\angle A$ and $\angle B$ are supplementary
 \angle 's. If $\angle A = 3n - 2$ and
 $\angle B = 7n - 18$, what is $m\angle A$?

$$\angle A + \angle B = 180^\circ$$

$$\downarrow$$

$$3n - 2 + 7n - 18 = 180$$

$$10n - 20 = 180$$

$$\frac{10n}{10} = \frac{200}{10}$$

$$\angle A = 3n - 2 \quad n = 20$$

$$= 3 \cdot 20 - 2$$

$$= 60 - 2$$

$$= 58^\circ$$

$\angle A$ and $\angle B$ are complementary.
 If $\angle A = 4n + 1$ and $\angle B = 6n + 9$,
 what is $m\angle A$?

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

$$\downarrow \quad \downarrow$$

$$4n + 1 + 6n + 9 = 90$$

$$10n + 10 = 90$$

$$\frac{10n}{10} = \frac{80}{10}$$

$$n = 8$$

$$\therefore \angle A = 4n + 1$$

$$= 4 \cdot 8 + 1$$

$$= 32 + 1$$

$$= 33$$

$\angle A$ and $\angle B$ are complementary.
 If $\angle B = 5n - 20$, what expression
 represents $\angle A$?

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

$$\angle A + 5n - 20 = 90$$

$$\angle A + 5n = 110$$

$$\angle A = 110 - 5n$$

$$(-5n + 110)$$