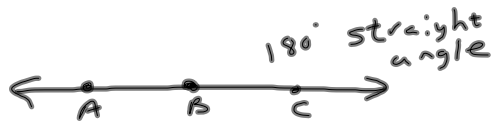
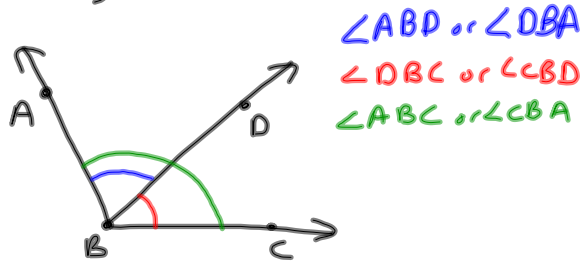


9-11-13
1st Geometry

Naming Angles



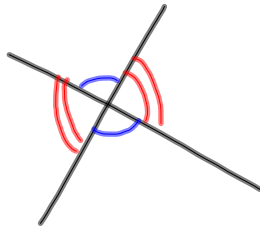
Complementary Angles

Two angles that add up to 90°.

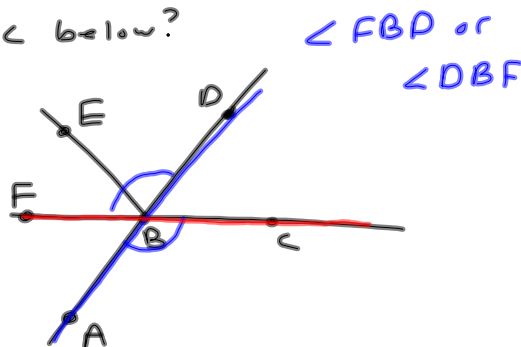
Supplementary Angles

Two angles that add up to 180°.

Vertical Angles



What is the vertical angle to $\angle ABC$ below?



$\angle A = 3n + 10$ and $\angle B = n + 30$.
 If $\angle A$ and $\angle B$ are vertical
 angles, what is $m\angle A$?

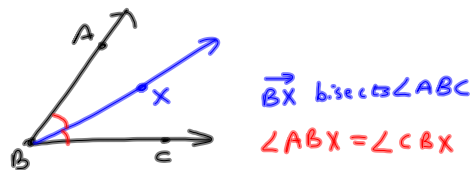
$$\begin{aligned} \angle A &= \angle B \\ \downarrow \\ 3n + 10 &= n + 30 \\ \underline{-n \quad -n} \\ 2n + 10 &= 30 \\ \underline{-10 \quad -10} \\ 2n &= 20 \\ \underline{\quad \quad} \\ n &= 10 \\ \angle A &= 3n + 10 \\ &= 3 \cdot 10 + 10 \\ &= 30 + 10 \\ &= 40^\circ \end{aligned}$$

$\angle A$ and $\angle B$ are complementary \angle 's.
 If $\angle A = 6n + 2$ and $\angle B = 4n + 8$,
 what is $m\angle A$?

$$\begin{aligned} \angle A + \angle B &= 90^\circ \\ \downarrow \quad \downarrow \\ 6n + 2 + 4n + 8 &= 90^\circ \\ 10n + 10 &= 90^\circ \\ \underline{-10 \quad -10} \\ 10n &= 80^\circ \\ \frac{10n}{10} &= \frac{80^\circ}{10} \\ n &= 8 \end{aligned}$$

$$\begin{aligned} \angle A &= 6n + 2 \\ &= 6 \cdot 8 + 2 \\ &= 48 + 2 \\ &= 50^\circ \end{aligned}$$

Bisect - cut into 2 equal parts



\vec{CD} bisects $\angle ACN$. If
 $\angle ACD = 40^\circ$, what is $m\angle ACN$?

