$$
\begin{aligned}
& \text { 9-11-13 } \\
& 1^{\text {st }} \text { Geometry } \\
& \text { Naming Angles }
\end{aligned}
$$

Complementery Angles
Two aoyles that add up to $90^{\circ}$.

Supplementary Angles
Two angles that add up to $180^{\circ}$

Vertical Angles


What is the vertical angle to $\angle A B C$ below? $\angle F B P$ or


$$
\begin{aligned}
& \angle A=3 n+10 \text { and } \angle B=n+30 \text {. } \\
& \text { If } \angle A \text { and } \angle B \text { are vertical } \\
& \text { angles, whet is } m \angle A \text { ? } \\
& \angle A=\angle B \\
& \downarrow \\
& \begin{array}{l}
3 n+10=n+30 \\
=n \\
2 n+10=30 \\
-10 \\
\frac{2 n}{2}=\frac{20}{2}
\end{array} \\
& \begin{array}{c}
\angle A=10 \\
\angle 3 n+10 \\
=3.10+10 \\
=30+10 \\
=40
\end{array}
\end{aligned}
$$

$\angle A$ and $\angle B$ are complementary $C$ is.
If $\angle A=6 n+2$ and $\angle B=4 n+8$,
What is $m \angle A$ ?
$\angle \underset{\downarrow}{A}+\angle B=90^{\circ}$
$6 n+2+4 n+8=90^{\circ}$

$$
\begin{array}{r}
10 n+10=90^{\circ} \\
-10-10 \\
\hline \frac{10 n}{10}=\frac{80}{10}
\end{array}
$$

$$
n=8
$$

$$
\begin{aligned}
\angle A & =6 n+2 \\
& =6.8+2 \\
& =48+2 \\
& =50^{\circ}
\end{aligned}
$$

$$
\begin{array}{r}
\text { Bisect-cut into } 2 \text { equal } \\
\text { porto }
\end{array}
$$


$\overrightarrow{B X}$ bisects $\angle A B C$
$\angle A B X=\angle C B X$
$\overrightarrow{C D}$ bisects $\angle A C N$. If
$\angle A C D=40^{\circ}$, what is $m \angle A C N$ ?

$80^{\circ}$

