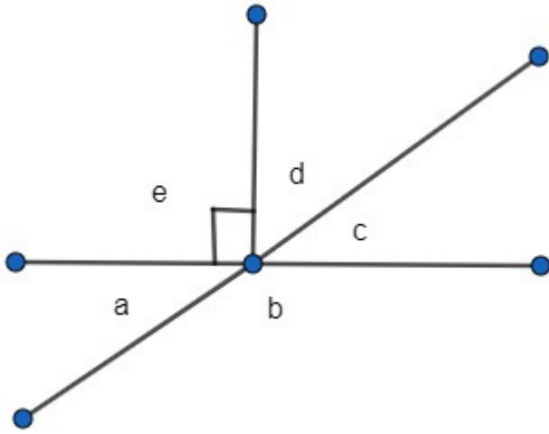


14.3 Special Angles

PRACTICE

Directions: Label each pair of angles as vertical, supplementary, complementary or none.



1) $\angle e$ and $\angle b$

NONE

2) $\angle b$ and $\angle c$

SUPPLEMENTARY

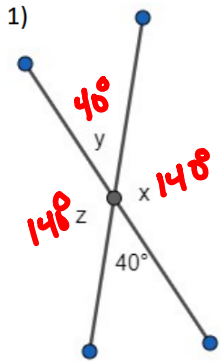
3) $\angle a$ and $\angle c$

VERTICAL

4) $\angle c$ and $\angle d$

COMPLEMENTARY

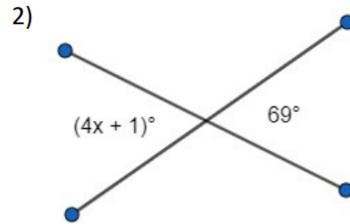
Directions: Solve for all variables.



$$x + 40 = 180$$

$$\boxed{x = 140}$$

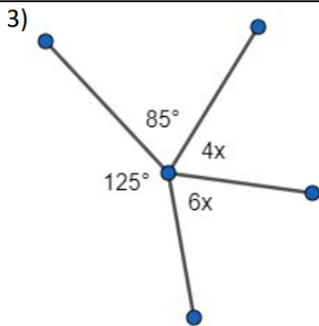
$$x = z \quad y = 40$$



$$4x + 1 = 69$$

$$\begin{aligned} -1 & \\ \hline 4x &= 68 \\ \frac{4x}{4} &= \frac{68}{4} \end{aligned}$$

$$\boxed{x = 17}$$



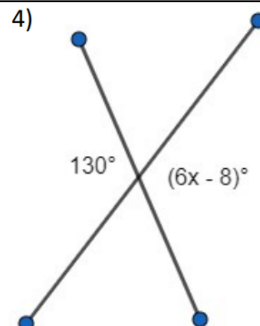
$$125 + 85 + 4x + 6x = 360$$

$$210 + 10x = 360$$

$$\begin{aligned} -210 & \\ \hline 10x &= 150 \\ \frac{10x}{10} &= \frac{150}{10} \end{aligned}$$

$$\frac{10x}{10} = \frac{150}{10}$$

$$\boxed{x = 15}$$

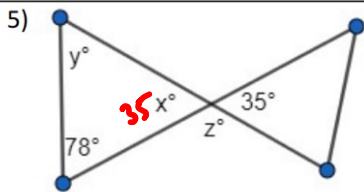


$$130 = 6x - 8$$

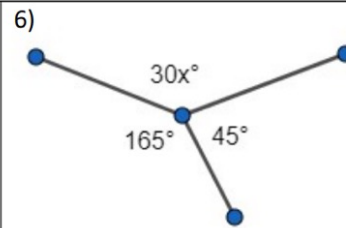
$$\begin{aligned} +8 & \\ \hline 138 &= 6x \\ \frac{138}{6} &= \frac{6x}{6} \end{aligned}$$

$$\frac{138}{6} = \frac{6x}{6}$$

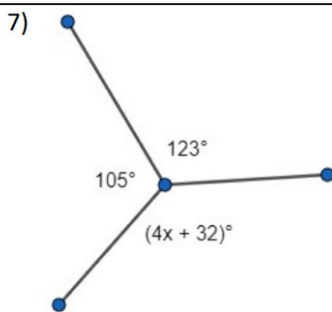
$$\boxed{23 = x}$$



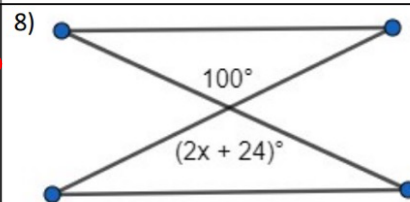
$$\begin{aligned}
 35 &= x \\
 z + 35 &= 180 \\
 -35 & \quad -35 \\
 \hline
 z &= 145^\circ
 \end{aligned}$$



$$\begin{aligned}
 30x + 45 + 165 &= 360 \\
 30x + 210 &= 360 \\
 -210 & \quad -210 \\
 \hline
 30x &= 150 \\
 \frac{30x}{30} &= \frac{150}{30} \\
 x &= 5^\circ
 \end{aligned}$$



$$\begin{aligned}
 105 + 123 + 4x + 32 &= 360 \\
 260 + 4x &= 360 \\
 -260 & \quad -260 \\
 \hline
 4x &= 100 \\
 \frac{4x}{4} &= \frac{100}{4} \\
 x &= 25^\circ
 \end{aligned}$$



$$\begin{aligned}
 100 &= 2x + 24 \\
 -24 & \quad -24 \\
 \hline
 76 &= 2x \\
 \frac{76}{2} &= \frac{2x}{2} \\
 38^\circ &= x
 \end{aligned}$$

