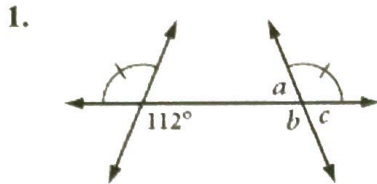
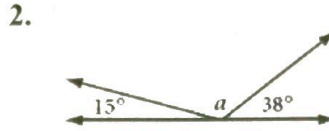


Finding Missing Angles #1

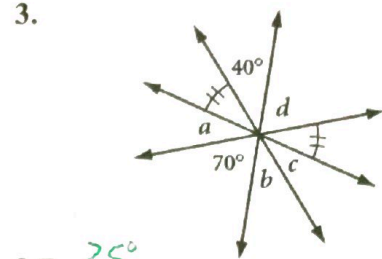
Without using a protractor, find the exact measures of the indicated angles in the diagrams below.



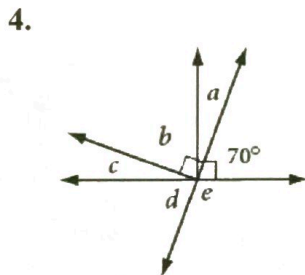
$$\begin{aligned} a &= \underline{68^\circ} \\ b &= \underline{112^\circ} \\ c &= \underline{68^\circ} \end{aligned}$$



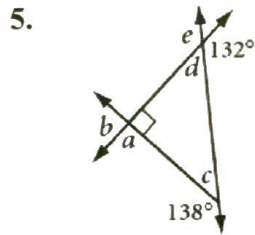
$$a = \underline{127^\circ}$$



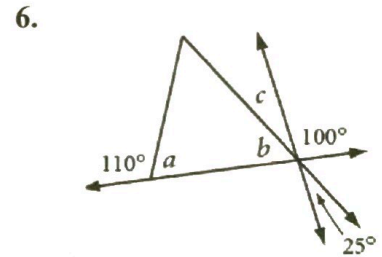
$$\begin{aligned} a &= \underline{35^\circ} \\ b &= \underline{40^\circ} \\ c &= \underline{35^\circ} \\ d &= \underline{70^\circ} \end{aligned}$$



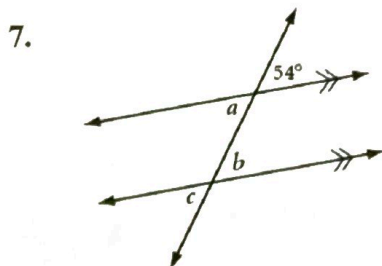
$$\begin{aligned} a &= \underline{20^\circ} \\ b &= \underline{70^\circ} \\ c &= \underline{20^\circ} \\ d &= \underline{70^\circ} \\ e &= \underline{110^\circ} \end{aligned}$$



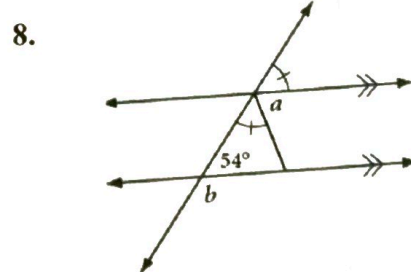
$$\begin{aligned} a &= \underline{90^\circ} \\ b &= \underline{90^\circ} \\ c &= \underline{42^\circ} \\ d &= \underline{48^\circ} \\ e &= \underline{132^\circ} \end{aligned}$$



$$\begin{aligned} a &= \underline{70^\circ} \\ b &= \underline{55^\circ} \\ c &= \underline{25^\circ} \end{aligned}$$

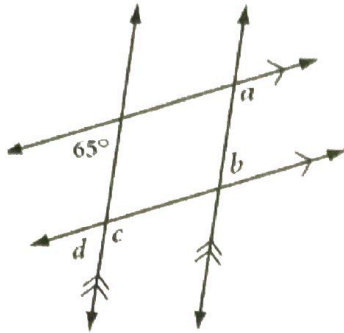


$$\begin{aligned} a &= \underline{54^\circ} \\ b &= \underline{54^\circ} \\ c &= \underline{54^\circ} \end{aligned}$$



$$\begin{aligned} a &= \underline{72^\circ} \\ b &= \underline{126^\circ} \end{aligned}$$

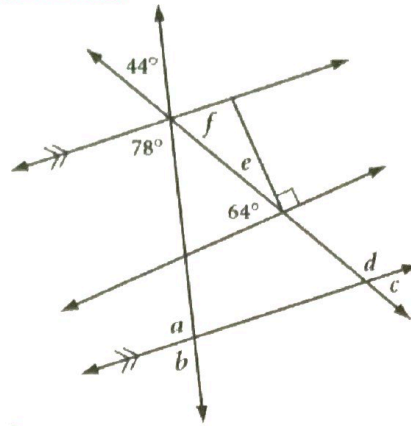
9.



$$\begin{aligned} a &= 115^\circ \\ b &= 65^\circ \\ c &= 115^\circ \\ d &= 65^\circ \end{aligned}$$

KEY

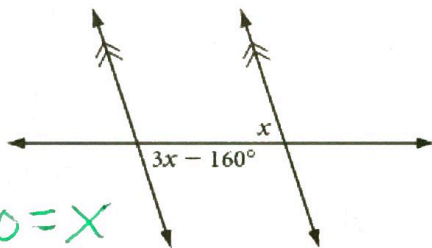
10.



$$\begin{aligned} a &= 102^\circ \\ b &= 78^\circ \\ c &= 58^\circ \\ d &= 122^\circ \\ e &= 26^\circ \\ f &= 58^\circ \end{aligned}$$

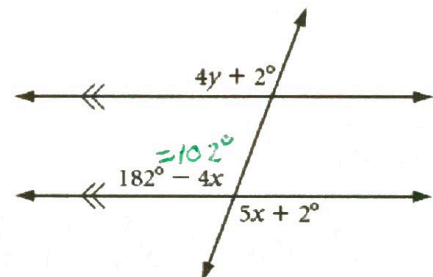
Find the measures of x and y in each problem. Make sure to show your work.

11.



$$\begin{aligned} 3x - 160 &= x \\ 2x &= 160 \\ x &= 80^\circ \end{aligned}$$

12.



$$\begin{aligned} 182 - 4x &= 5x + 2 \\ 180 &= 9x \\ \boxed{20} &= x \\ 182 - 4(20) &= 102^\circ \end{aligned}$$

$$\begin{aligned} 102 &= 4y + 2 \\ 100 &= 4y \\ \boxed{25} &= y \end{aligned}$$

Fill in each blank with a true statement.

13. If $\angle A \cong \angle B$ and the supplement of $\angle B$ has measure 22° , then $m\angle A = \underline{158^\circ}$.

14. If $\angle P$ is a right angle and $\angle P$ and $\angle Q$ form a linear pair, then $m\angle Q$ is $\underline{90^\circ}$.

15. If $\angle S$ and $\angle T$ are complementary and $\angle T$ and $\angle U$ are supplementary, then $\angle U$ is a(n) $\underline{\text{obtuse}}$ angle.

16. If one angle of a linear pair is obtuse, then the other is $\underline{\text{acute}}$.