

Name Key

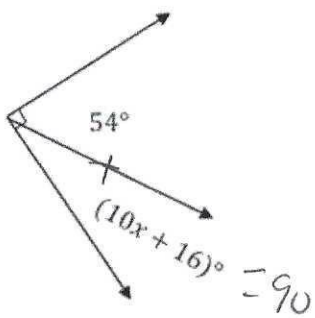
Date _____

Math 8R

Period _____

Pairs of Angles Review

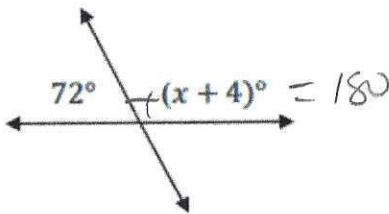
1) Solve for x in the following diagram.



Complementary $+90^\circ$

$$\begin{aligned} 54 + 10x + 16 &= 90 \\ 70 + 10x &= 90 \\ -70 &\quad -70 \\ \hline 10x &= 20 \\ \frac{10x}{10} &= \frac{20}{10} \\ \boxed{x=2} \end{aligned}$$

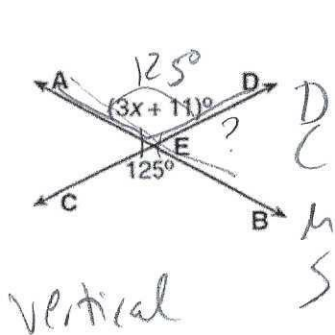
2) Solve for x in the following diagram.



Supplementary $+180^\circ$

$$\begin{aligned} 72 + x + 4 &= 180 \\ 76 + x &= 180 \\ -76 &\quad -76 \\ \hline \boxed{x=104} \end{aligned}$$

3) In the accompanying diagram, \overline{AB} and \overline{CD} intersect at point E. If $m\angle AED = (3x + 11)^\circ$ and $m\angle CEB = 125^\circ$, find the value of x. Then solve for the $m\angle AED$ and then solve for the $m\angle DEB$



Vertical
=

$$\begin{aligned} 3x + 11 &= 125 \\ \cancel{11} &\quad -11 \\ \hline 3x &= 114 \\ \frac{3x}{3} &= \frac{114}{3} \\ x &= 38 \end{aligned}$$

$$\begin{aligned} m\angle AED &= 3x + 11 \\ m\angle AED &= 3(38) + 11 \\ m\angle AED &= 114 + 11 \\ \boxed{m\angle AED} &= \boxed{125^\circ} \end{aligned}$$

$$\begin{aligned} \boxed{m\angle DEB} &= \boxed{55^\circ} \\ 180 & \\ -125 & \\ \hline 55 & \end{aligned}$$