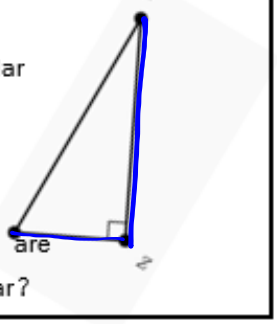
Learning Card # _____ Name:

Facts!

Perpendicular lines meet at a 90° angle.

The symbol for perpendicular is: ⊥

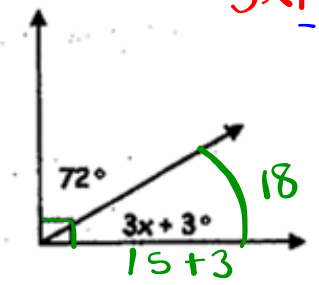
$\overline{AZ} \perp \overline{GZ}$



Which lines are perpendicular?

Are the 2 lines perpendicular?

If yes, solve for x



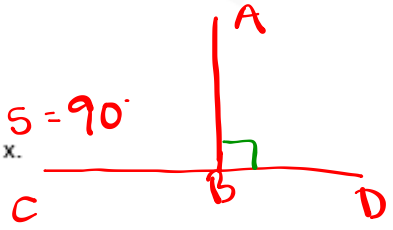
$3x + 3 = 18$
$-3 \quad -3$
$\frac{3x}{3} = \frac{15}{3}$
$x = 5$

$\overline{AB} \perp \overline{CD}$

$\angle ABD = 5x + 15$

$75 + 15 = 90$

Draw and solve for x.



$5x + 15 = 90$
$-15 \quad -15$
$5x = 75$
$x = 15$

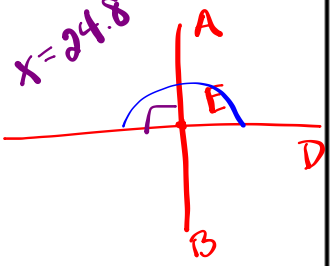
$\overline{AB} \perp \overline{CD}$, label the intersection point E

$\angle CED = 7x + 6 = 180$
$-6 \quad -6$
$7x = 174$

C

$x = 24.8$

$\angle AEC = 2(y - 6)$



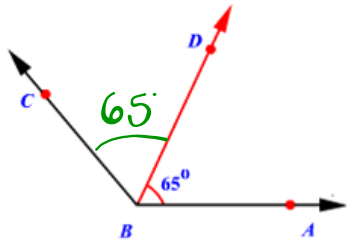
Draw and solve for x and y.

$x = 24.8$ $y = 51$

Perpendicular Lines

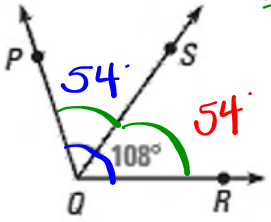
Learning Card # _____	Name:

Angle bisectors divide an angle into 2 congruent angles



$\overrightarrow{QS}$ bisects $\angle PQR$. Find $m\angle PQS$.

$\frac{108}{2} = 54°$



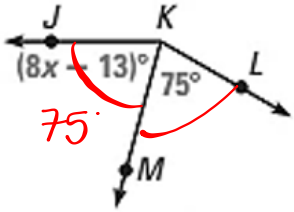
$\overrightarrow{KM}$ bisects $\angle JKL$. Find the value of x.

$8x - 13 = 75°$

$+13 \quad +13$

$8x = 88$

$x = 11$



Practice word problem:

$\angle ABC = 86°$

$\angle ABC$ is bisected by segment BD.

$\angle DBC = 4x - 5$

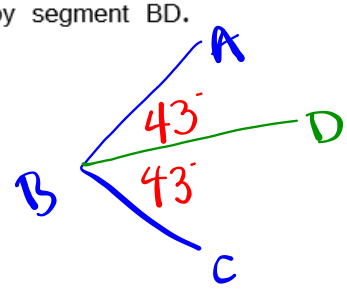
Solve for X.

$43 = 4x - 5$

$+5 \quad +5$

$48 = 4x$

$x = 12$



Angle Bisector