Example Problem:
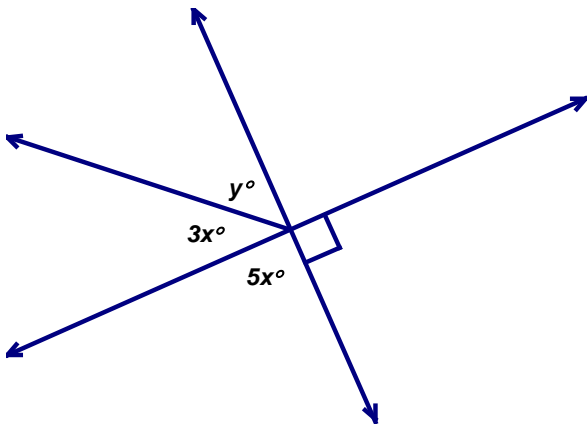
First you must decide which relationship exists between the angles:

Are the angles equal?
Do they add to 90°?
Do they add to 180°?

Answer the question.
Write the correct algebraic equation.
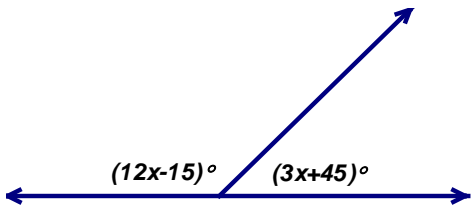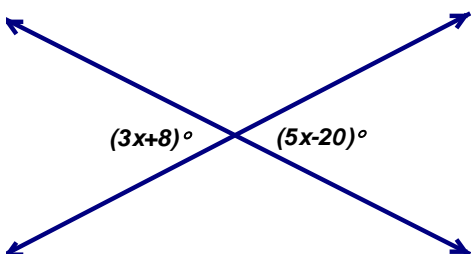Solve.

In this case:
$$5x = 90$$
$$y + 3x = 90$$
$$5x + y + 3x = 180$$

We can solve the first equation and find $x = 18$.
Then we can find the y value by substituting into either equation and solving $y = 36$

Find all unknown values. Fill in the table to organize the thought process…

Question	Relationship	Equation	Answer(s)
1) $54°$ $4x$			
2) $y°$ $3x°$ $75°$			
3) $3x°$ $2x°$			
4) $(x+10)°$ $(4x-35)°$			

Question	Relationship	Equation	Answer(s)
5) $(12x-15)°$ $(3x+45)°$			
6) $(3x+8)°$ $(5x-20)°$			

7) One angle is twice as large as its complement. Find the measure of both angles.