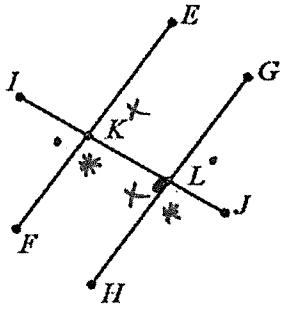
e: Key

11/4/19

Unit 6 Review (Test 10/8/19)

Name the angle pair. Then state if they are congruent or supplementary.

$\overline{EF} \parallel \overline{GH}$



a. $\angle EKL$ and $\angle GLJ$
Corresponding
Congruent

b. $\angle IKF$ and $\angle GLJ$
Alternate exterior
Congruent

c. $\angle JKF$ and $\angle KLH$
Consecutive
Congruent

d. $\angle ILH$ and $\angle JLH$
Linear pair
Supplementary

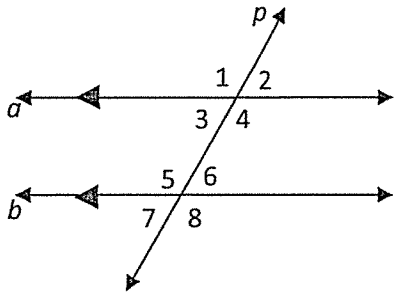
e. $\angle JLH$ and $\angle ILG$
Vertical angles
Congruent

f. $\angle EKL$ and $\angle HLK$
Alternate interior
Congruent

g. $\angle JLH$ and $\angle JKF$
Corresponding
Congruent

h. $\angle EKJ$ and $\angle GLK$
Consecutive
Supplementary

$a \parallel b$ and p is a transversal. Fill in the blanks describing the angle relationships with regard to $\angle 3$.



$\angle 3$ and $\angle$ 1 are a linear pair

$\angle 3$ and $\angle$ 4 are a linear pair

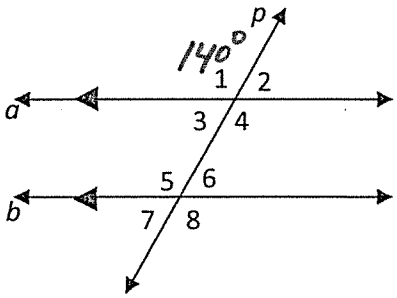
$\angle 3$ and $\angle$ 2 are vertical angles

$\angle 3$ and $\angle$ 7 are corresponding angles

$\angle 3$ and $\angle$ 6 are alternate interior angles

$\angle 3$ and $\angle$ 5 are consecutive interior angles

$a \parallel b$ and p is a transversal. If $m\angle 1 = 140°$, find the measure of each angle giving one reason for each answer.



$m\angle 2 =$ 40°
Supplementary

$m\angle 3 =$ 40°
Supplementary

$m\angle 4 =$ 140°
Vertical angles

$m\angle 5 =$ 140°
Corresponding Angles

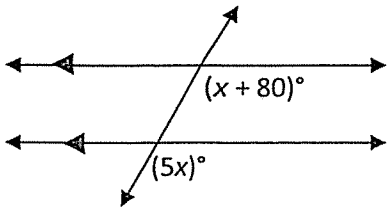
$m\angle 6 =$ 40°
Supplementary

$m\angle 7 =$ 40°
Supplementary

$m\angle 8 =$ 140°
Alternate Exterior Angles

Identify the type of angles and their relationship. Write the equation used to solve for x. Then, find the value of x. Put a box around your answer.

1.



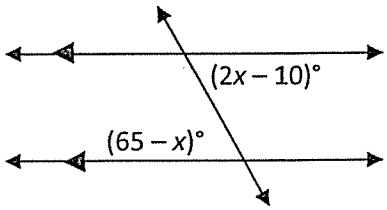
type of angles: Corresponding Angles

relationship: Congruent

equation: $x + 80 = 5x$

$x = 20$

2.



type of angles: Alternate interior

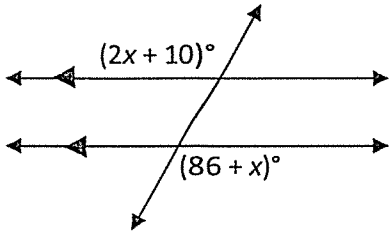
relationship: Congruent

equation: $2x - 10 = 65 - x$

$x = 25$

Identify the type of angles and their relationship. Write the equation used to solve for x. Then, find the value of x. Put a box around your answer.

3.



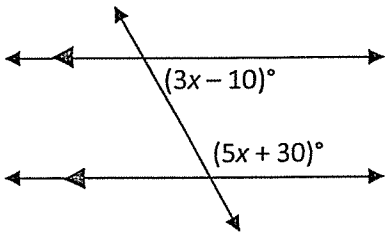
type of angles: Alternate exterior

relationship: Congruent

equation: $2x + 10 = 86 + x$

$x = 38°$

4.



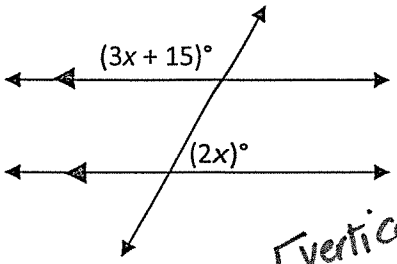
type of angles: Consecutive interior

relationship: Supplementary

equation: $3x - 10 + 5x + 30 = 180°$

$x = 20$

5.



[Vertical → Consecutive]

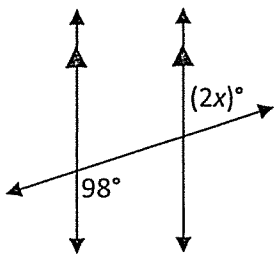
type of angles: Supplementary

relationship: Supplementary

equation: $3x + 15 + 2x = 180°$

$x = 33$

6.



[Vertical → Consecutive]

type of angles: Supplementary angles

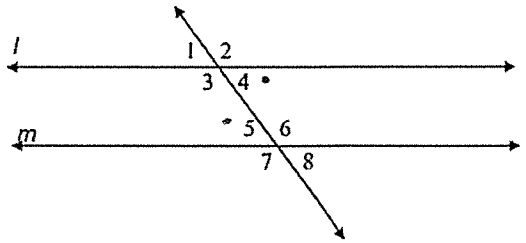
relationship: Supplementary

equation: $2x + 98 = 180°$

$x = 41$

1) Given $L \parallel m$

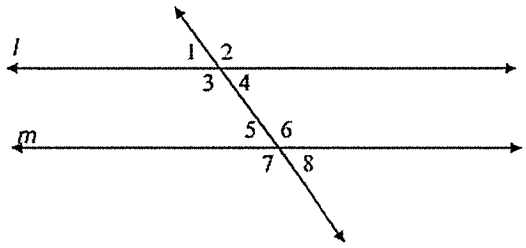
Prove : $m\angle 4 = m\angle 5$



Statements	Reasons
$L \parallel m$	Given
$\angle 4 \cong \angle 8$	**Corresponding angles**
$m\angle 4 = m\angle 8$	Def of Congruence
$m\angle 8 = m\angle 5$	Vertical angles
$m\angle 4 = m\angle 5$	Transitive property .

2) Given $L \parallel m$

Prove : $\angle 1 \cong \angle 8$



Statements	Reasons
$L \parallel m$	Given
$\angle 1 \cong \angle 4$	Vertical angles
$\angle 4 \cong \angle 8$	Corresponding angles
$\angle 1 \cong \angle 8$	Transitive property

Circle if the lines are parallel, perpendicular, or neither.

$y = 2x - 3$ & $y = 2x + 1$ $m = 2$ $m = 2$	Parallel	Perpendicularlar	Neither
$3x - 5y = 7$ & $10x + 6y = 12$ $m = \frac{3}{5}$ $m = -\frac{5}{3}$	Parallel	Perpendicularlar	Neither
$4x + 6y = 12$ & $2x + 3y = 9$ $y = -\frac{2}{3}x + \frac{4}{3}$ $y = -\frac{2}{3}x + 3$ $m = -\frac{2}{3}$ $m = -\frac{2}{3}$	Parallel	Perpendicularlar	Neither
$4x + 4y = 18$ & $3x - 2y = 4$ $m = -1$ $m = \frac{3}{2}$	Parallel	Perpendicularlar	Neither
$y = \frac{-1}{7}x - 3$ & $0.7x + 0.1y = 500$ $m = -\frac{1}{7}$ $m = -7$	Parallel	Perpendicularlar	Neither