LEARNING TARGETS
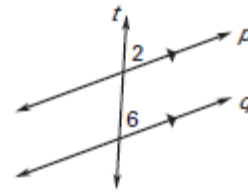
- I can identify angle pairs formed by a transversal.
- I can use the angles formed by parallel lines and transversals to solve algebraic problems.
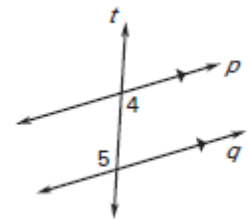
Corresponding Angles Postulate

If two parallel lines are cut by a transversal, then the pairs of corresponding angles are _____.
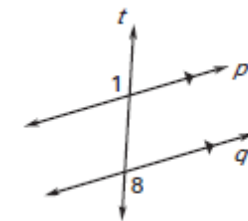
Alternate Interior Angles Theorem

If two parallel lines are cut by a transversal, then the pairs of alternate interior angles are _____.
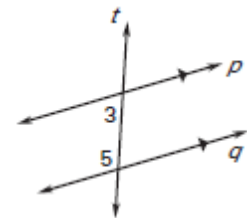
Alternate Exterior Angles Theorem

If two parallel lines are cut by a transversal, then the pairs of alternate exterior angles are _____.
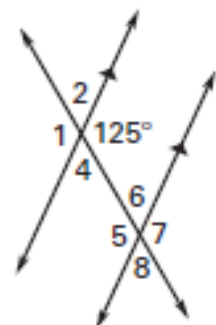
Consecutive Interior Angles Theorem

If two parallel lines are cut by a transversal, then the pairs of consecutive interior angles are _____.
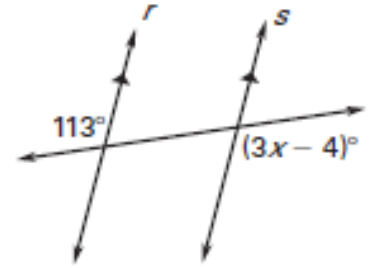
Example 1: The measure of 3 of the numbered angles is 125°. Identify which of the angles are 125°. Give a reason for each.
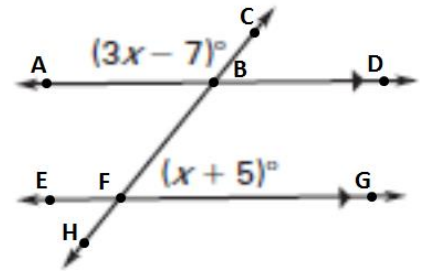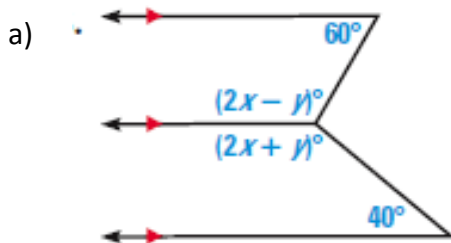
Example 2:

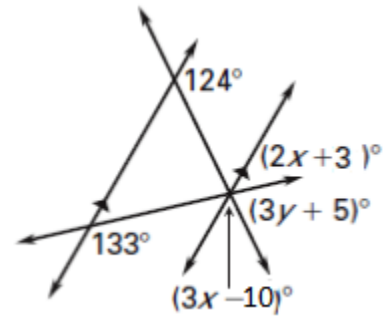a) Find the value of x. Give a reason for each step when solving.

$113°$ $(3x - 4)°$

b) Find the value of x. Give a reason for each step when solving.

$(3x - 7)°$ $(x + 5)°$

Example 3: Find the values of x and y.

a)

$60°$

$(2x - y)°$

$(2x + y)°$

$40°$

b)

$124°$

$(2x + 3)°$

$(3y + 5)°$

$133°$

$(3x - 10)°$

Example 4: In the diagram, $m \parallel n$. Find the value of x. Explain how you obtained your answer.

$57°$ m

$x°$

$22°$

n