- _____ are angles to add up to 90°

- _____ are angles to add up to 180°

  - These angles are also known as a _____ because they form a

    _____

    - What are some examples of linear pairs? _____

- Two lines are _____if they lie in the same plane and never intersect.

  - If lines m and n are parallel, we write _____.

- Transversal: A line that _____ two or more lines at _____ points.

- Exterior angles: _____ the lines

  - Exterior Angles → _____

- Interior angles: _____ the lines

  - Interior Angles → _____
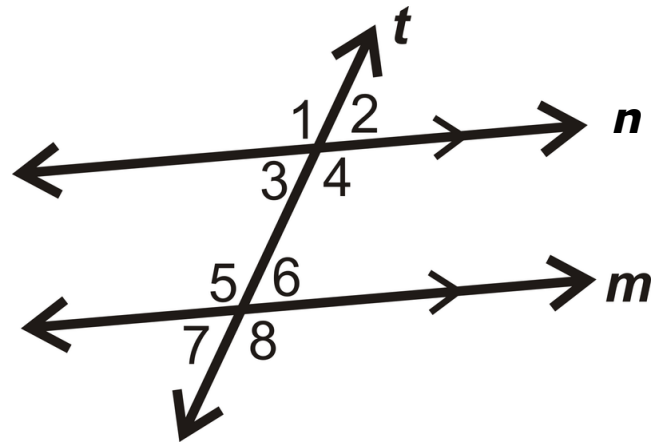
Corresponding Angles

- Corresponding Angles: angles that have corresponding

  or _____ positions on the parallel lines.

  - When a transversal crosses two parallel lines, the corresponding angles are _____.

- Identify the corresponding angles created when transversal t intersected parallel lines n and m.

  - ∠1 ≅ _____   - ∠3 ≅ _____

  - ∠2 ≅ _____   - ∠4 ≅ _____

Vertical Angles

  - Vertical Angles: are angles that share the same _____ or corner
    o Vertical angles are _____

- Identify the pairs of vertical angles when transversal t intersected parallel lines n and m.

  - ∠1 ≅ _____   - ∠3 ≅ _____   - ∠5 ≅ _____   - ∠7 ≅ _____

Interior Angles

- <u>Consecutive Interior Angles:</u> angles that are on the _____ of the transversal and are _____ the parallel lines

  - Consecutive interior angles are _____ (add up to _____) if the two lines the transversals crosses are parallel

- If l and m are parallel, identify the Consecutive interior angles and their sum.

  - What is the consecutive interior angle corresponding to ∠3? _____ (∠3 + ∠___ = _____)

  - What is the Consecutive interior angle corresponding to ∠4? _____ (∠4 + ∠___ = _____)

- <u>Consecutive Exterior Angles:</u> angles that are on the _____ of the transversal and are _____ the parallel lines

  - Consecutive exterior angles are _____ (add up to _____) if the two lines the transversals crosses are parallel

- If l and m are parallel, identify the Consecutive exterior angles and their sum.

  - What is the Consecutive exterior angle corresponding to ∠1? _____ (∠1 + ∠___ = _____)

  - What is the Consecutive exterior angle corresponding to ∠2? _____ (∠2 + ∠___ = _____)

Alternate Angles

- <u>Alternate interior angles:</u> angles that are on _____ of the transversal and are _____ the parallel lines

  - Alternate interior angles are _____

- <u>Alternate exterior angles:</u> angles that are on _____ of the transversal and are _____ the parallel lines

  - Alternate exterior angles are _____

- What type of relationship exists between ∠3 *and* ∠6? _____

  - Name the other pair of alternate interior angles. _____

- What type of relationship exists between ∠1 *and* ∠8? _____

  - Name the other pair of alternate exterior angles. _____

Identify each set of angles below as corresponding, vertical, alternate interior, alternate exterior, Consecutive interior, or Consecutive exterior. What does that tell you about the pair of angles?
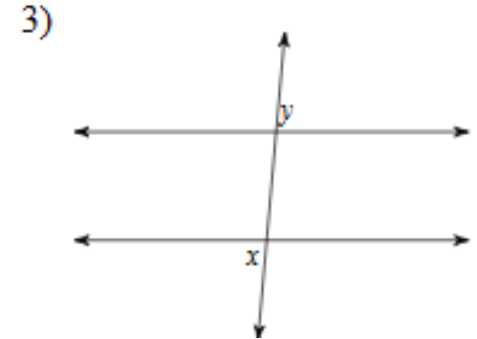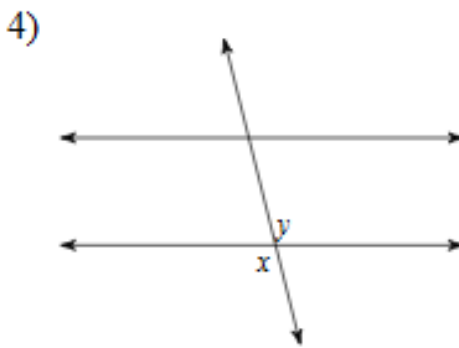
1)

y

x

_____

_____

2)

y

x
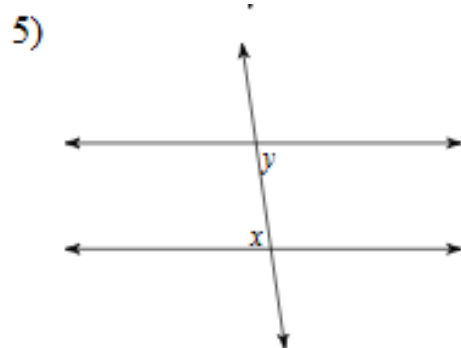
_____

_____

3)

y

x

_____
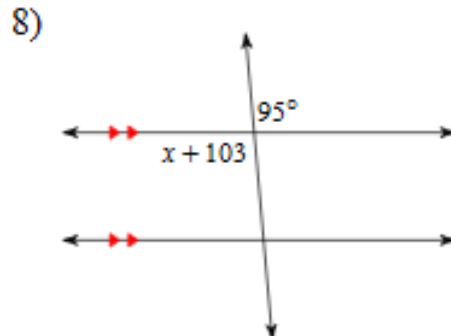
_____

4)

y

x

_____

_____

5)

y

x

_____

_____

6)

y

x

_____

_____
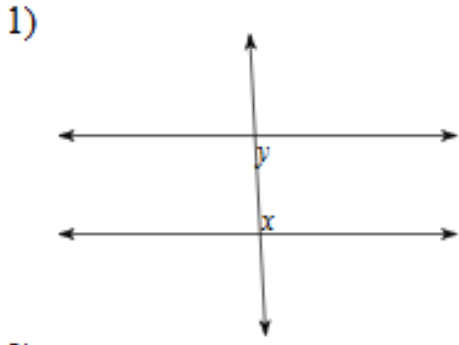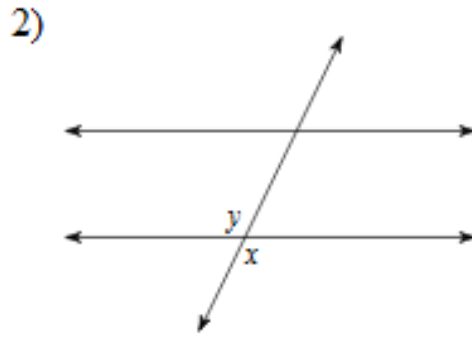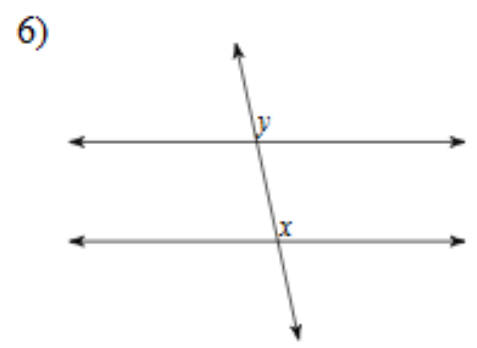
Solve for the value of x in each set of parallel lines below:

7)

$8x+4$

$18x-6$

8)

$95°$

$x+103$

9)

$x+113$

$x+75$
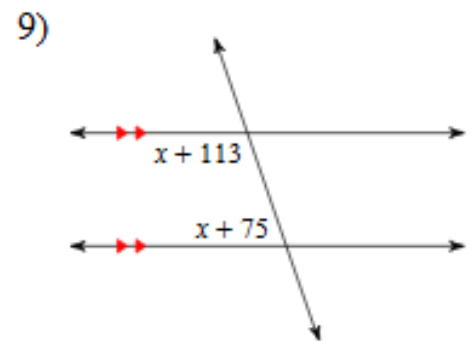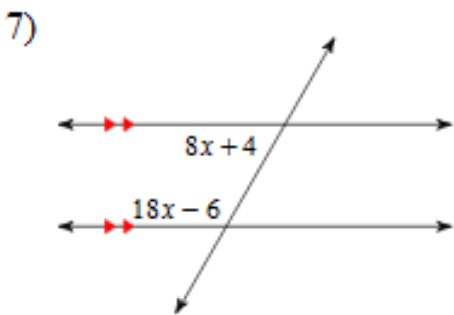
Find the measure of the angle indicated in bold:

10)

$11x + 1$
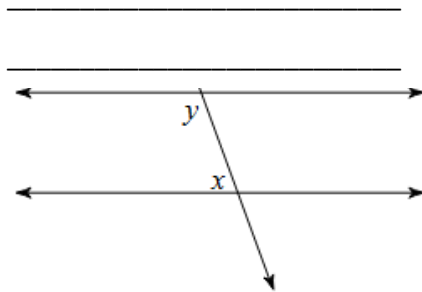
$10x + 10$

11)

$12x + 8$

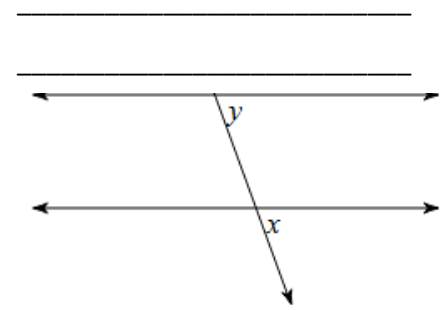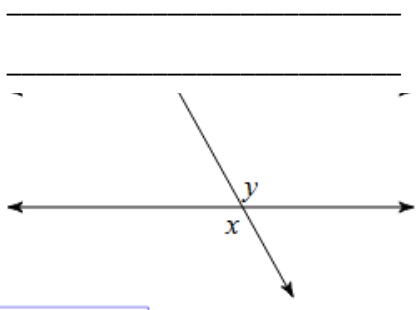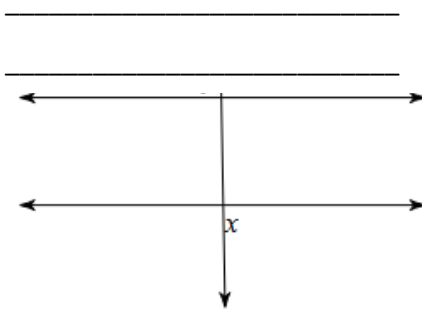$14x - 4$

12)
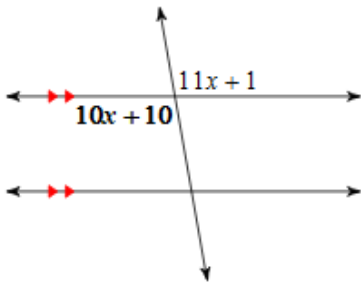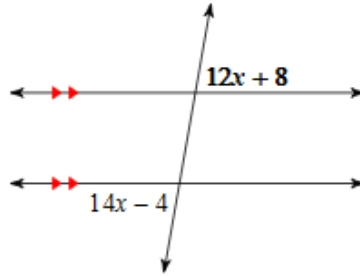
$13x - 7$ / $8x - 2$
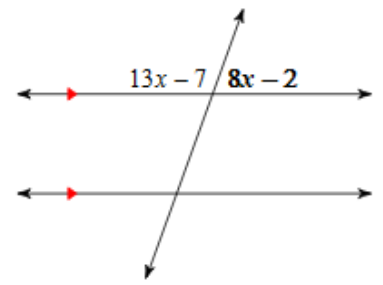
<u>Lesson 1 – Classwork/Homework – Properties of Transversals</u>

Identify each set of angles below as corresponding, vertical, alternate interior, alternate exterior, and consecutive interior or consecutive exterior. Then, determine whether each pair is congruent or supplementary.
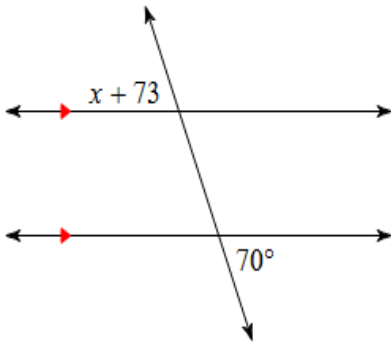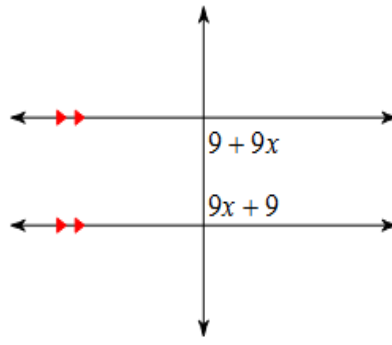
1) _____   _____   _____

_____   _____   _____

y

x

y

x

y

x

4) _____   _____   _____

_____   _____   _____

x

y

x

y

x
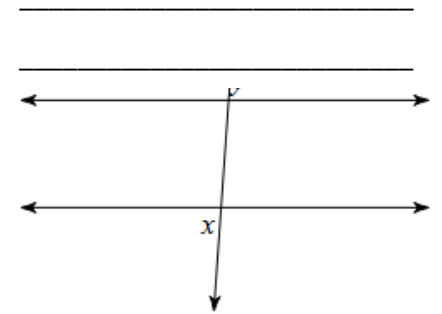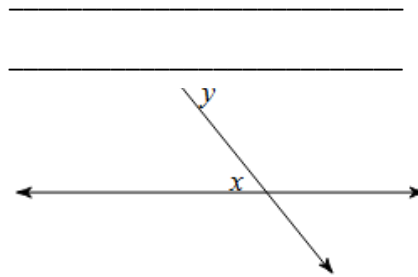
Identify the relationship between the two angles, then solve for x.

7)

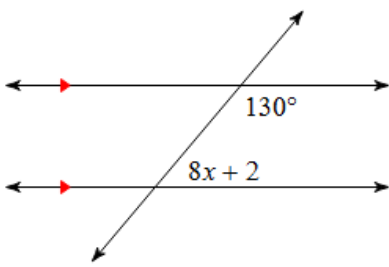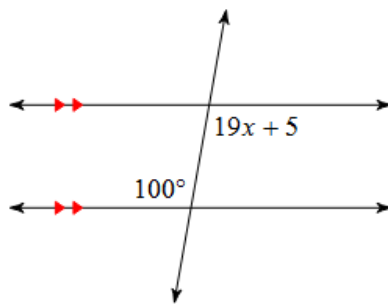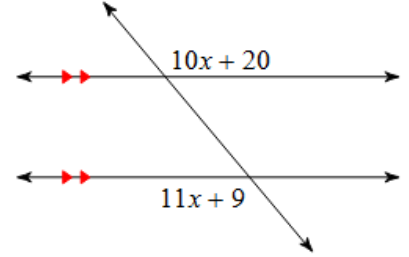$x + 73$

$70°$

8)

$9 + 9x$

$9x + 9$

9)

$80°$

$5x + 20$

10)

$130°$

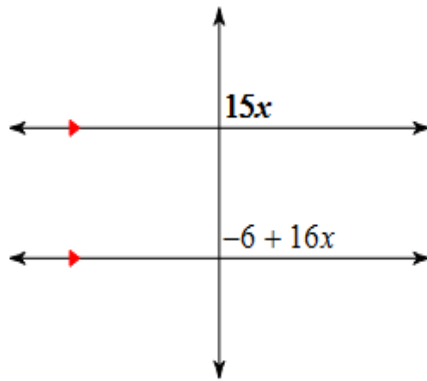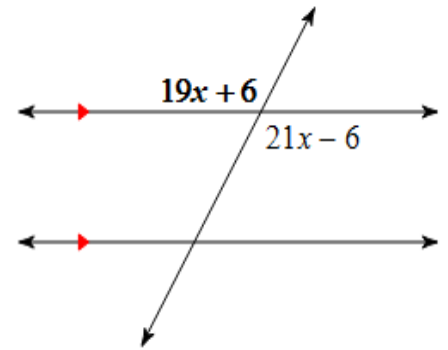$8x + 2$

11)

$19x + 5$

$100°$

12)

$10x + 20$

$11x + 9$
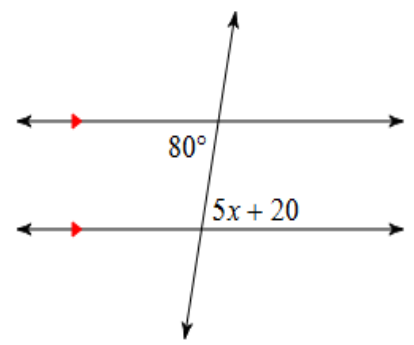
Identify the relationship that exists between the two angles, then find the measure of the bolded angle.

13)

$15x$

$-6 + 16x$

14)

$19x + 6$

$21x - 6$

15)

$10x$

$9x + 7$

16)

$5x$ $14x + 9$

17)

$9x + 11$

$10x + 2$

18)

$23x - 5$

$22x$