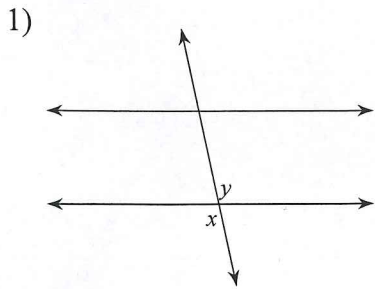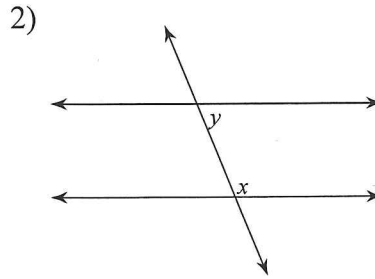Name_____Key_____ ID: 1

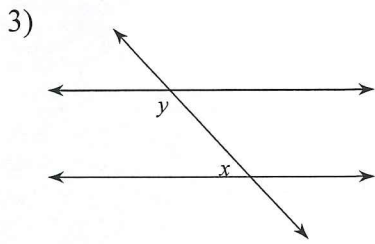# Parallels Cut by a Transversal: Day 2 HW

Date_____ Hour____

Identify each pair of angles as corresponding, alternate interior, alternate exterior, consecutive interior, vertical, or adjacent.

1)

y
x

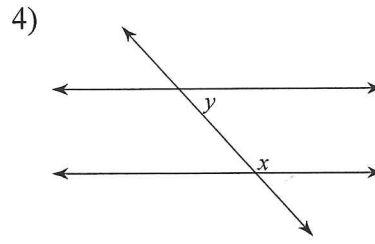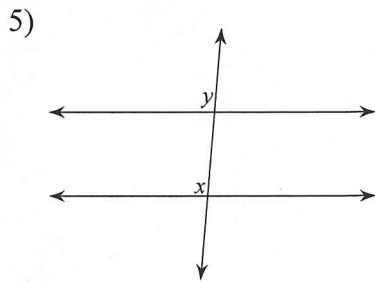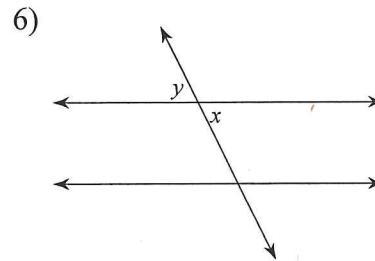vertical

2)

y
x

consecutive interior

3)

y
x

consecutive interior

4)

y
x

consecutive interior

5)

y
x

corresponding

6)

y
x

vertical

Directions: Find the value of the variable and justify your set up
You must use only the following relationships:
Corresponding angles are congruent
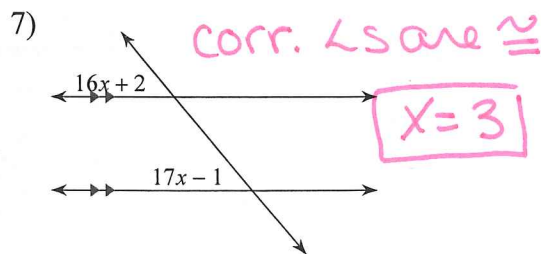**Alternate interior angles are congruent**
Alternate exterior angles are congruent
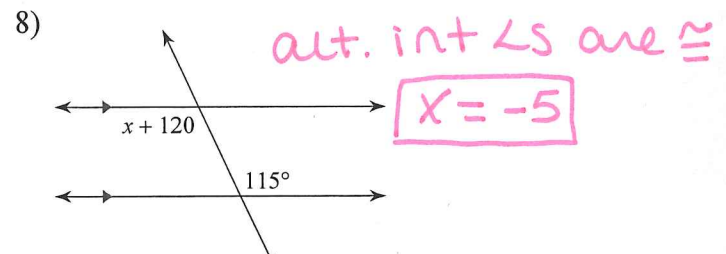**Consecutive interior angles are supplementary**
Linear pairs are supplementary
Vertical angles are congruent
Solve for x.

7)

$16x + 2$

$17x - 1$

corr. ∠s are ≅

$\boxed{x = 3}$

3

8)

$x + 120$

$115°$

alt. int ∠s are ≅

$\boxed{x = -5}$

−5

9)

$80 = 15x + 5$

alt. int. ∠s are ≅

80°

15x + 5

$\boxed{X = 5}$

5

10)

consecutive int ∠s are suppl.

x + 134

x + 54

−4

$x + 134 + x + 54 = 180$

$2x + 188 = 180$

$-188 \quad -188$

$\dfrac{2x}{2} = \dfrac{-8}{2}$

$\boxed{X = -4}$

11)

x + 66

55°

vertical ∠s are ≅

$\boxed{X = -11}$

−11

12)

7x + 9   −9 + 11x

linear pairs are suppl.

$\boxed{X = 10}$

10

Solve for x.

13)

36x + 5

2 + 37x

$36x + 5 = 2 + 37x$

alt Ext ∠s are ≅

$\boxed{X = 3}$

3

14)

14x + 7

16x − 7

corr. ∠s are ≅

$\boxed{X = 7}$

7

15)

x + 140

130°

alt int ∠s are ≅

$\boxed{X = -10}$

−10

16)

11x − 9

$11x - 9 = 90$

alt. Ext ∠s are ≅

$\boxed{X = 9}$

9

17)

10x + 6

11x − 1

7

alt. Ext ∠s are ≅

$\boxed{X = 7}$

18)

4x + 14

5x + 5

9

$4x + 14 = 5x + 5$

corresponding ∠s are ≅

$\boxed{X = 9}$

-2-