PARALLEL LINES AND A TRANSVERSAL REVIEW

NAME: _____   DATE: _____

Name the relationship between the two angles.

1) ∠1 & ∠5 _____
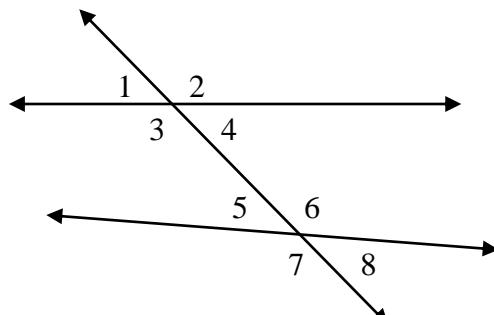
2) ∠2 & ∠7 _____

3) ∠3& ∠6 _____

4) ∠5 & ∠8 _____

5) ∠4& ∠6 _____   6) ∠8 & ∠4 _____

7) ∠6 & ∠2 _____   8) ∠1 & ∠6 _____

9) ∠3 & ∠5 _____   10) ∠8 & ∠1 _____

Line *ℓ* and *m* are parallel. State the theorem or postulate that justifies the statement.

11)   ∠3 ≅ ∠7

If _____,

then_____.

12)   ∠1 ≅ ∠8

If _____,

then_____.
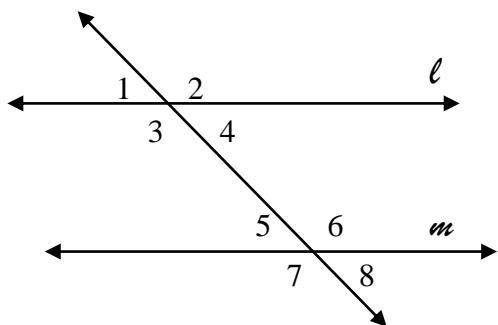
13)   ∠4 + ∠6 = 180°

If _____,

then_____.

Find the value of x and y.

14)

$x =$ _____ $y =$ _____

15)

$x =$ _____ $y =$ _____

16)

$x =$ _____ $y =$ _____

17)

$x =$ _____
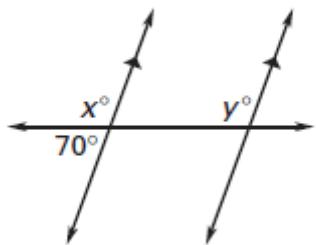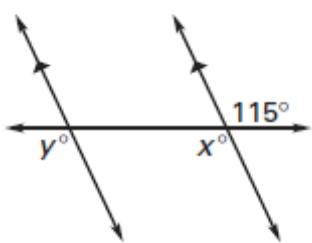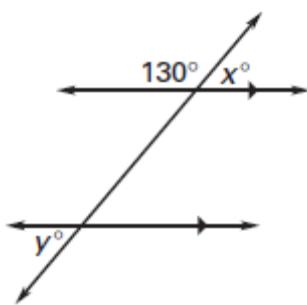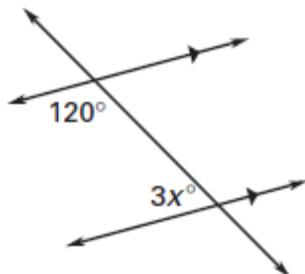
**SECTION 2: Copy each diagram in your text and write the reasons for each answer.**

1)
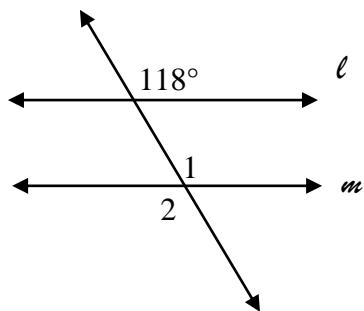
118°

ℓ

1

2

m

m∠1 = _____

m∠2= _____

2)

72°

ℓ

1 2

m

m∠1 = _____

m∠2= _____

3)

1

ℓ

127°

2

m

m∠1 = _____

m∠2 = _____

4)

ℓ

1 2

m

m∠1 = _____

m∠2 = _____

5)

ℓ

81°

1

m

2

6)

ℓ   m

2

98°

1

m∠1 = _____   m∠1 = _____

m∠2 = _____   m∠2 = _____
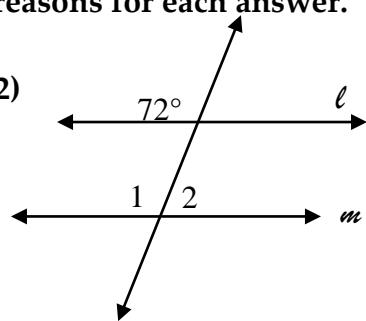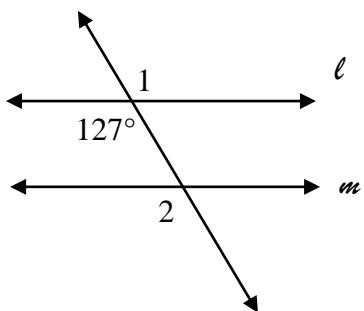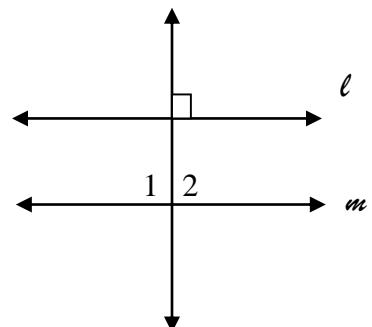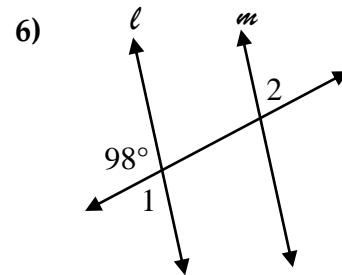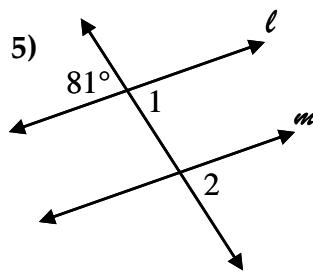
Line *l* and *m* are parallel. Find the value of x.

7)

80°

(5x-15)°

l

m

8)

(3x+27)°

129°

l

m

9)

75°

(4x − 9)°

l

m

10)

3x°

(2x + 20)°

l

m