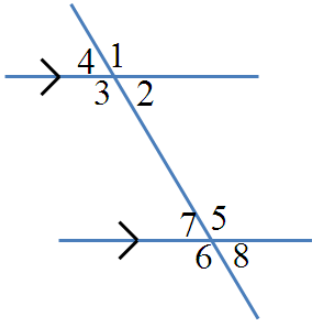Name: _____   Date:_____

Math 9 HW Section 8a Understanding Parallel Lines

1. Given the diagram below, please find all the corresponding angles, alternate interior angles, vertically opposite angles, co-interior angles on the same side of the transversal:
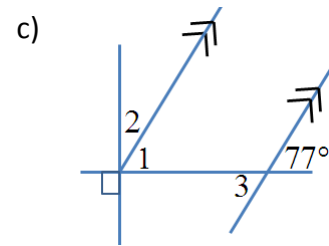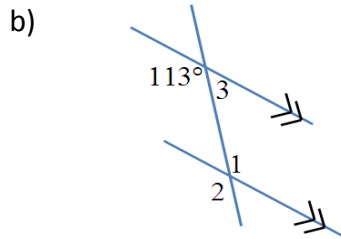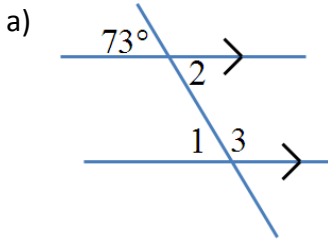

i)Corresponding Angles: ii)Vertically Opposite Angles

iii) Alternate Interior Angles   iv) Co-Interior Angles on the same side of the transversal

2. Given each of the following set of parallel lines, find the value of the missing angles. Provide reasons for your answers:

a)

∠1 = ____ _____

∠2 = ____ _____

∠3 = ____ _____

b)

∠1 = ____ _____

∠2 = ____ _____

∠3 = ____ _____

c)

∠1 = ____ _____

∠2 = ____ _____

∠3 = ____ _____

d)

∠1 = ____ _____

∠2 = ____ _____

∠3 = ____ _____

e)

∠1 = ____ _____

∠2 = ____ _____

∠3 = ____ _____

f)

∠1 = ____ _____

∠2 = ____ _____

∠3 = ____ _____

g)

84°

$2x+6°$
$3y-1°$

x = _____ _____

y = _____ _____

h)

75°

65°

$2y+4°$ $3x+5°$

x = _____ _____

y = _____ _____

i)

$4x+35°$

$7x+5°$
$y°$

x = _____ _____

y = _____ _____

j)

84°

$2x+6°$
$3y-1°$

x = _____ _____

y = _____ _____

k)

$12x$ $13x$
$y°$

$10x$
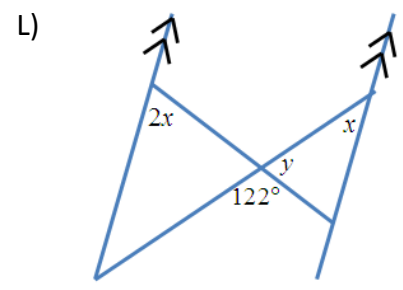
x = _____ _____

y = _____ _____

L)

$2x$

x

y
122°
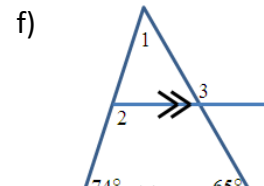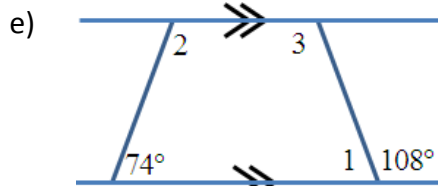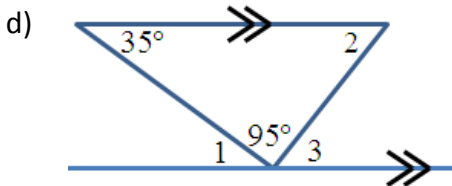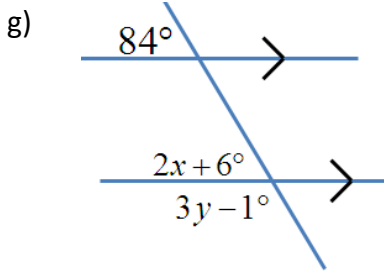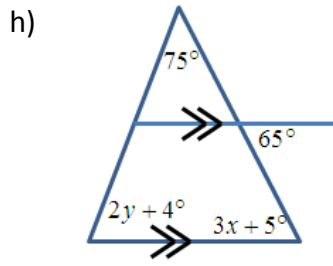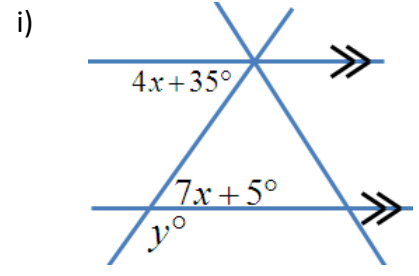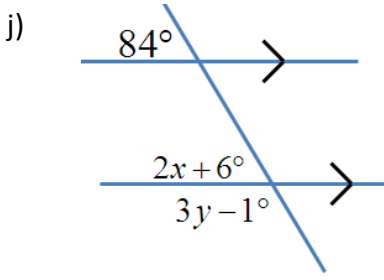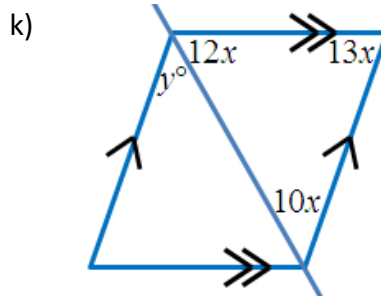
x = _____ _____

y = _____ _____

3. Given the following diagram below, indicate which of the angles are equal to angle "1". List them all out and justify your answer:

1 16   17 7
14 5   10 6

13 18   2 9
11 3   15 8