Using Properties of Parallel Lines

Line *a* is parallel to line *b*. Line *c* is parallel to line *d*. Find the angle measures.

$m\angle 1 = $ _____
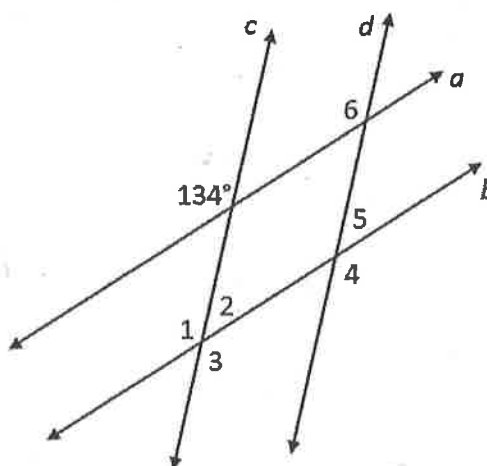
$m\angle 2 = $ _____

$m\angle 3 = $ _____

$m\angle 4 = $ _____

$m\angle 5 = $ _____

$m\angle 6 = $ _____

Line *e* is parallel to line *f*. Find the angle measures.

$m\angle 1 = $ _____ $m\angle 8 = $ _____
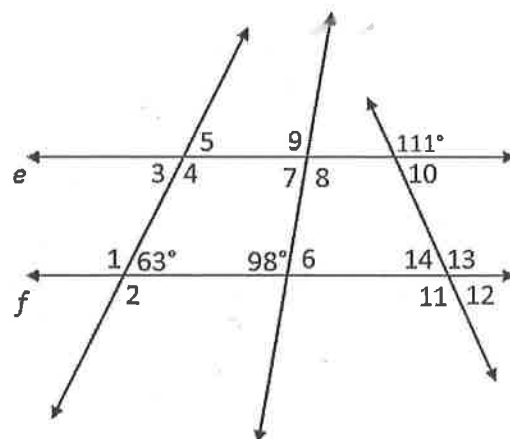
$m\angle 2 = $ _____ $m\angle 9 = $ _____

$m\angle 3 = $ _____ $m\angle 10 = $ _____

$m\angle 4 = $ _____ $m\angle 11 = $ _____

$m\angle 5 = $ _____ $m\angle 12 = $ _____

$m\angle 6 = $ _____ $m\angle 13 = $ _____

$m\angle 7 = $ _____ $m\angle 14 = $ _____

Angle and Triangle Theorems

1. Match each word to its corresponding property.

a)	two lines at right angles to each other	1)	parallel
b)	two angles or sides next to each other	2)	supplementary
c)	angles whose sum is 90°	3)	perpendicular
d)	two lines that do not intersect	4)	adjacent
e)	angles whose sum is 180°	5)	F pattern
f)	corresponding angles are equal and produce this pattern	6)	opposite
g)	when two lines intersect, these angles are the equal	7)	C pattern
h)	alternate angles are equal and produce this pattern	8)	Z pattern
i)	co-interior angles add to 180° and produce this pattern	9)	complementary

2. Find the measures of angles a, b and c. Give reasons for each answer.

a)
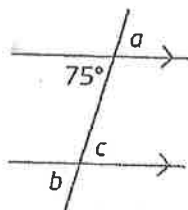
b)
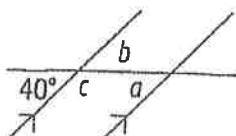
c)
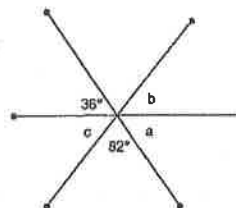
d)
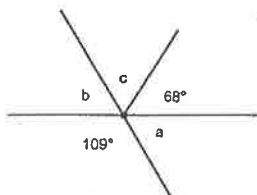
e)

f)

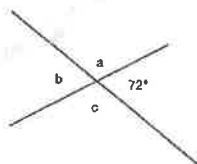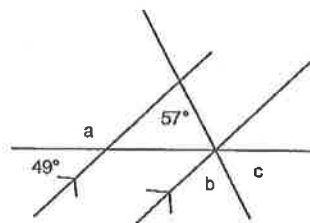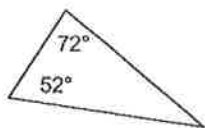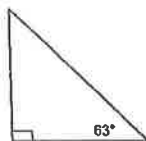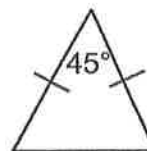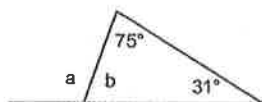3. Find the measure of the unknown angle in each triangle.

a)

b)

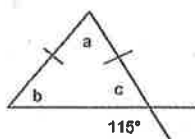c)

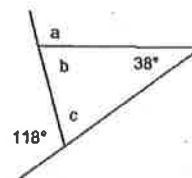4. Find the measures of the unknown angles a, b and c. Explain your reasoning.

a)

b)

c)

d)

e)
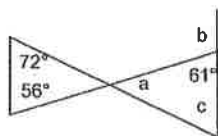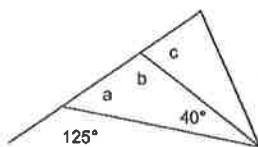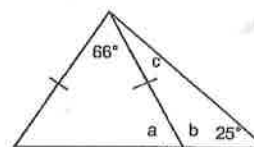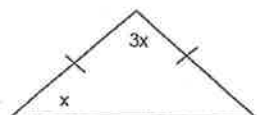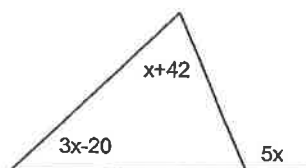
f)

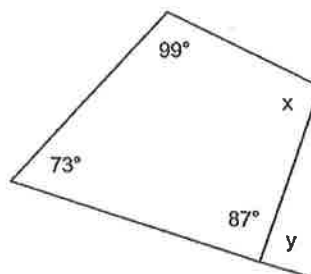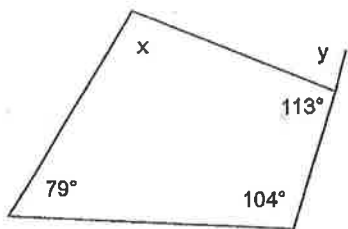5. Determine the measure of each indicated angle. Explain your reasoning.

a)

b)

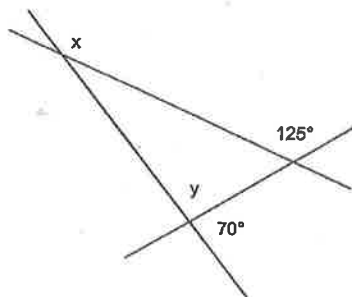# Interior and Exterior Angles of Polygons

1. Find the value of x and y in each diagram.
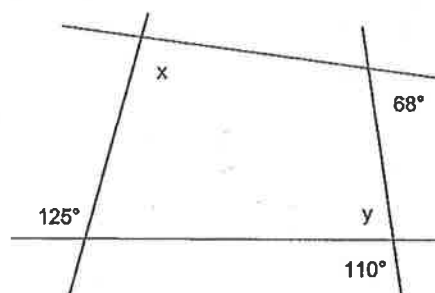
a)

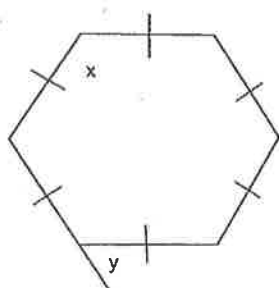b)

c)

d)

e)

f)

190