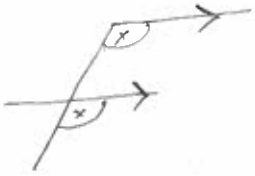
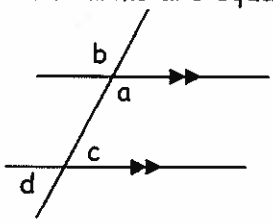
More Angle Properties

- Parallel lines are shown by arrows.

- When 2 or more parallel lines are crossed, 3 patterns are formed.

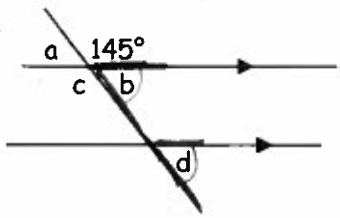
i) F Pattern: the values under the arms are equal. (Corresponding angles)





Ex/ Determine the missing angles.

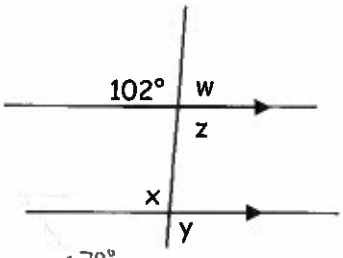
a)



$a = 180 - 145°$
$= 35°$
$b = 35°$ (opposite)

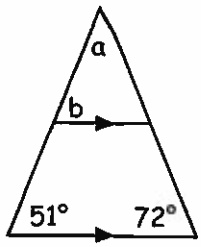
$c = 145°$
$d = 35°$ (F)

b)



$w = 78°$
$x = 102°$ (F)
$y = 102°$ (opposite)
$z = 102°$

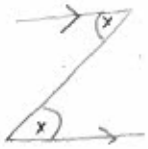
c)

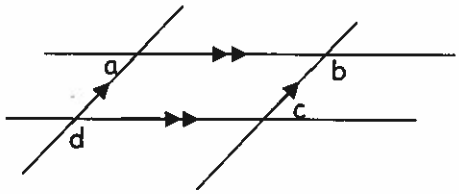


$a = 180 - 51 - 72$
$= 57°$

$b = 51°$ (F)

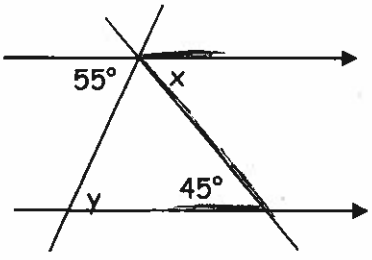
ii) Z Pattern: the alternate angles are equal.





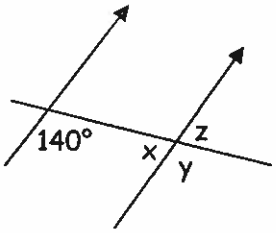
Ex/ Determine the missing angles.

a)



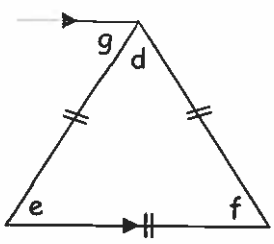
$x = 45°$ (Z)
$y = 55°$

b)



$x = 40°$
$y = 140°$ (F)
$z = 40°$

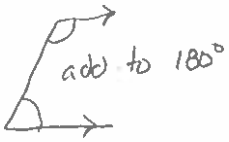
c)

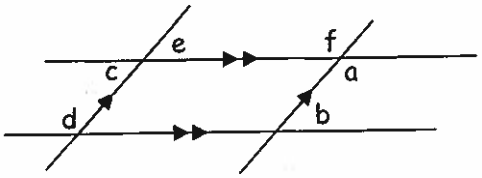


$d = e = f = \frac{180}{3}$
$= 60°$

$g = 60°$ (Z)

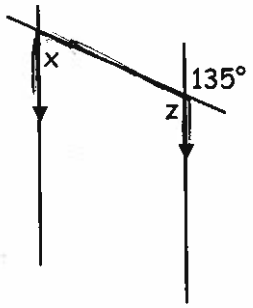
iii) C Pattern: the interior angles add to 180°. (Supplementary interior angles)





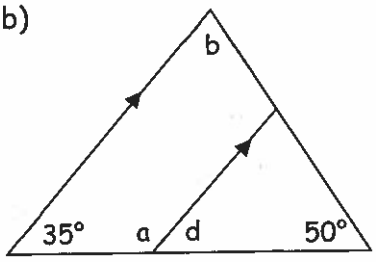
Ex/ Determine the missing angles.

a)



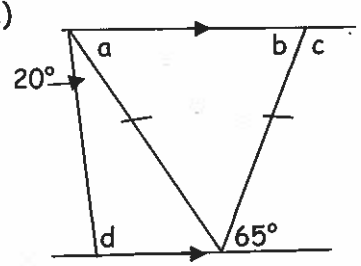
$x = 45°$ (C)
$z = 135°$ (opposite)

b)



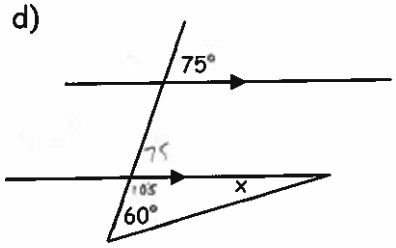
$a = 145°$ (C)
$b = 95°$
$d = 35°$ (F)

c)



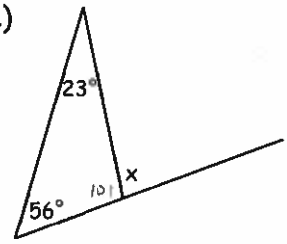
$a = 65°$ (isosceles)
$b = 65°$ (z)
$c = 115°$
$d = 95°$ (C)

d)



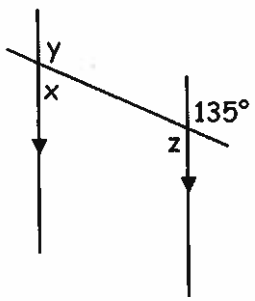
$x = 15°$

e)



$x = 79°$

f)



$x = 45°$
$y = 135°$
$z = 135$