



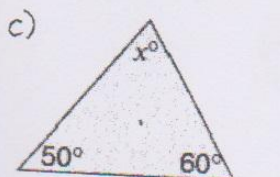
# Quadrilateral & Triangle

Find the value of the pronumeral in each of the following (show your work)

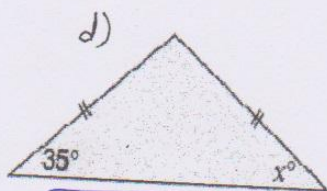


a)  $1 + 2 + 3 + 4 = 360^\circ$   
 $95 + 70 + 100 + x = 360$   
 $265 + x = 360$   
 $x = 360 - 265$   
 $x = 95^\circ$

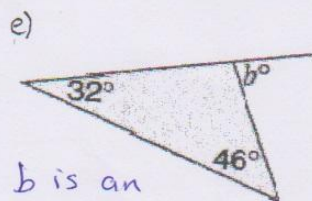
b)  $1 + 2 + 3 + 4 = 360$   
 $100 + 50 + \alpha + 2\alpha = 360$   
 $150 + 3\alpha = 360$   
 $3\alpha = 360 - 150$   
 $3\alpha = 210$   
 $\alpha = 210 \div 3$   
 $\alpha = 70^\circ$



$1 + 2 + 3 = 180$   
 $50 + 60 + x = 180$   
 $110 + x = 180$   
 $x = 180 - 110$



$x = 35^\circ$   
 because it is Isosceles



$b$  is an exterior angle  
 $b = 32 + 46$   
 $b = 78^\circ$



f)  $x = 70$   
 Now after we know angle  $m$  we can find angle  $x$   
 $1 + 2 + x = 180$   
 $50 + 75 + x = 180$   
 $125 + x = 180$   
 $x = 180 - 125$   
 $x = 55^\circ$

\* In the small triangle one angle is missing (?)

$1 + 2 + 3 = 180$   
 $60 + 45 + m = 180$   
 $105 + m = 180$   
 $m = 180 - 105$   
 $m = 75$



g)  $m = 50$   
 This triangle is equilateral all angles =  $60^\circ$   
 angle  $(60 + 70)$  together are co-interior with  $m$  so their total is 180  
 $m = 50$



h)

angle  $w = 75$   
 because it's Isosceles

angle  $x, w, v$  are supplementary  
 the total = 180  
 $x + w + v = 180$   
 $60 + 75 + v = 180$   
 $135 + v = 180$   
 $v = 180 - 135$   
 $v = 45$

angle  $x$  is in small triangle  
 $1 + 2 + 3 = 180$   
 $x + 90 + 30 = 180$   
 $x + 120 = 180$   
 $x = 180 - 120$   
 $x = 60$   
 $u = 110$   
 $v = 45$   
 $w = 75$   
 $x = 60$   
 $y = 70$

$u$  and  $y$  are supplementary  
 $u + y = 180$   
 $u + 70 = 180$   
 $u = 180 - 70$   
 $u = 110$