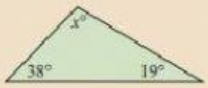
Angles in Triangle

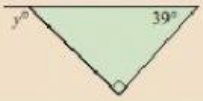
Example

Find the unknown in the following, giving brief reasons:

a



b



a $x + 38 + 19 = 180$ {angle sum of a triangle}

$\therefore \quad x = 180 - 38 - 19$

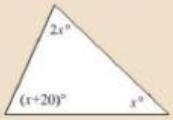
$\therefore \quad x = 123$

b $y = 39 + 90$ {exterior angle of a triangle}

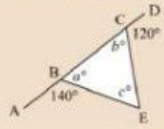
$\therefore \quad y = 129$

Find the values of the unknowns in each triangle, giving a brief reason:

a



b



a $2x + x + (x + 20) = 180$ {angles of a triangle}

$\therefore \quad 4x + 20 = 180$

$\therefore \quad 4x = 160$

$\therefore \quad x = 40$

b $a + 140 = 180$ {angles on a line}

$\therefore \quad a = 180 - 140 = 40$

Likewise $b = 180 - 120 = 60$

But $a + b + c = 180$ {angles of a triangle}

$\therefore \quad 40 + 60 + c = 180$

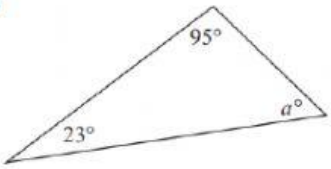
$\therefore \quad 100 + c = 180$

$\therefore \quad c = 80$

Exercise:

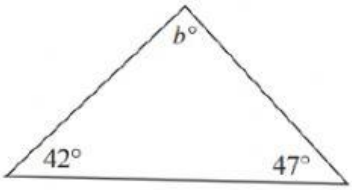
1) Find the unknown in the following, give brief reasons:

a



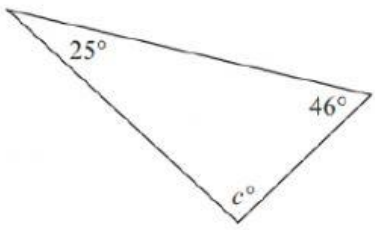
	Reason:

b



	Reason:

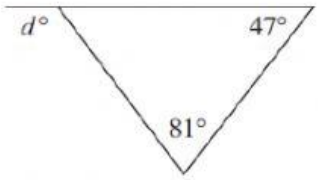
c



	Reason:

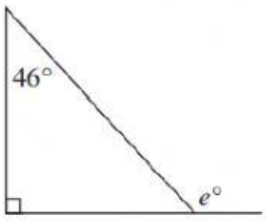
LIVEWORKSHEETS

d



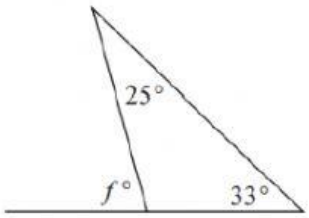
Reason:

e



Reason:

f



Reason:

2) The three angles of a scalene triangle are $x^0, (x-12)^0$ *and* $(2x+6)^0$. What are the sizes of this angles?

LIVEWORKSHEETS