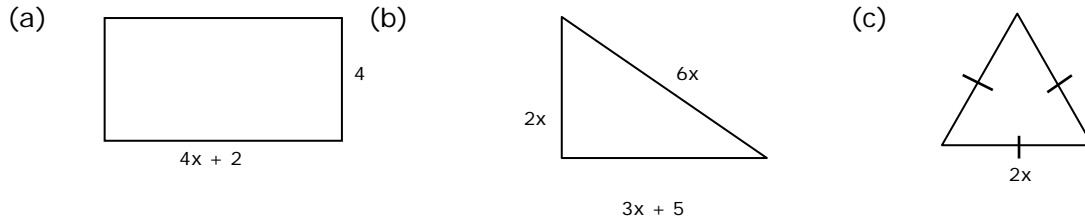


## National 4 Homework Exercise 17 Substitution

**Q1** Given that  $x = 4$ ;  $y = 10$ ;  $z = 5$  find the value of

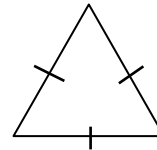
- a)  $2x$       b)  $z^2 + 4$       c)  $2xy$       d)  $xy - 7z$       e)  $y^2 - z^2$

**Q2** Write down a formula for calculating the Perimeter of these shapes:-



**Q3** The perimeter of an equilateral triangle is given by  $P = 3x$  where  $x$  is the length of one side.

- a) Find the perimeter when  $x = 4.2$  cm  
b) Find the length of a side when  $P = 22.2$  cm



**Q4** A taxi company uses a formula to work out the cost (£C) of each journey:-

To calculate C, use the formula  $C = 1.5m + 2.20$   
Where  $m$  stands for number of miles travelled

Calculate the cost of journeys which are :-

- a) 8 miles  
b) 15 miles



**Q5** The Current, C amps, of an electrical appliance is calculated using the formula:-

$C = P/240$ , where P watts is the power rating

A Hoover has a power rating of 1400 watts.  
The fuse should be the one just bigger than the power rating  
The choice of fuses is 3amp, 5 amp, 13 amp

Which fuse should be used.

