



1) a) Substitute the values given for each shape to work out the values of each expression.

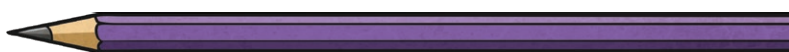
 = 3
  = 5
  = 8

i)  +  + 

ii)  - 

b) Draw the missing shape so that this expression has a value of 21.

 +  + _____



2) a) Use substitution to work out the values of these expressions.

$a = 6$ $b = 2.5$ $c = 12$

$b + 9$

$c - b$

ac

$a + c + b$

$b - 3$

b) Give the missing value so that the following expression has a value of 6. $c -$ _____

3) Use substitution to work out the values of these expressions.

$c = 0.5$ $f = 3$ $z = 1.25$

$3f + z$

$10c + f$

$4z - f$

$c + z + 0.25$

$cf + zf$

- 1) Do you agree or disagree with each of these statements about this formula?
Try substituting numbers into the formula to test your thinking.

$$c = 2b$$



- a) In this formula, the value of c is 4.

- b) In this formula, the value of b is half the value of c .

- 2) Are the following statements true or false? Explain your reasoning.

- a) When $f = 3$, $8f + 9$ has a value of 32.

- b) When $x = 10$ and $y = 1.5$, $xy + 20$ has a value of 35.

- c) When $x = 2.5$ and $f = 2.25$, $4x + 2f$ has a value of 13.5.



- 1) In both of these formulae, c stands for the same number and has a value between 20 and 100. Using substitution, give c a value and then find the possible values of a , b , x and z that will make all the formulae correct. Find two different solutions.

$$c = 4x - z$$

$$3a + 4b = c$$

- 2) By using substitution, give each of the shapes a different value so that the value of the expression will be a multiple of 6. Find at least four different possibilities.



= a square number



= a prime number



= a multiple of 4



+



+

