1) a) i) 16 ii) -5

b) 

2) a)

b + 9	11.5
c − b	9.5
ac	72
a + c + b	20.5
b − 3	-0.5

b) a or 6

3)

3f + z	10.25
10c + f	8
4z − f	2
c + z + 0.25	2
cf + zf	5.25

1) a) As we do not know the value of b in this formula, we have no way of knowing if the value of c is 4. For example, if b = 2, c = 2 × 2. This means c now equals 4. However, if b = 3, c = 2 × 3. This means c now equals 6, not 4.

b) This statement is correct. Although we do not know the exact values of b or c, we do know that 2 lots of b will give us c. If we apply the inverse operation, we can see that b must have a value that is half that of c.

2) a) This is false. (8 × 3) + 9 = 33

b) This is true. (10 × 1.5) + 20 = 35

c) This is false. 4 × 2.5 = 10

2 × 2.25 = 4.5

10 + 4.5 = 14.5

1) A variety of answers are possible, for example:

a = 4, b = 3, x = 9, z = 12, c = 24

a = 8, b = 4, x = 16, z = 24, c = 40

2) A variety of answers are possible, for example:

9 + 5 + 4 = 18

9 + 13 + 8 = 30

25 + 3 + 8 = 36

25 + 5 + 36 = 66