National 4 Lifeskills Mathematics
Practice Unit Assessment
Geometry and Measures 1

1) For the formula $A = 3B + 15$ work out the value of A when $B = 7$.

2) For the formula $C = 8D - 9$ work out the value of C when $D = 9$.

3) For the formula $V = 125 - 7W$ work out the value of V when $W = 12$.

4) For the formula $Y = Z^2 + 24$ work out the value of Y when $Z = 5$.

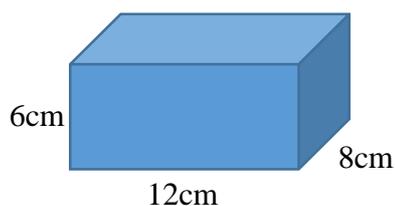**5)** Peter is a taxi driver and to work out how much he charges he uses the formula

$$F = 2 + 1{\cdot}2m$$

where F is the fare in pounds and m is the distance of the journey in miles.
Calculate the fare for a 7 mile journey.

6) To work out the time T taken in minutes to walk a distance d in miles you use the formula

$$T = d \div 0{\cdot}05$$

Work out, in hours and minutes, the time it would take to walk 10 miles.

7) A man needs to be at work for 8:15am. He knows it takes him 1 hour and 20 minutes to get to work. What is the latest time the man can leave for work?

8) If it takes 3 hours 50 minutes to cook a chicken what is the latest time you can start to cook it if you want the chicken to be cooked by 1830?

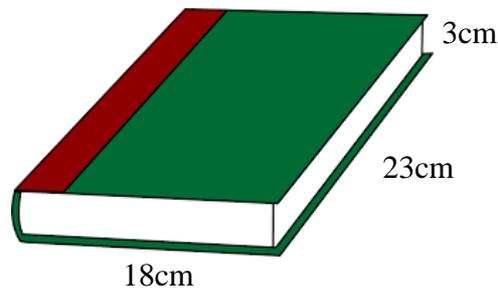**9)** Below is a cuboid measuring 12cm by 8cm by 6cm.

6cm

8cm

12cm

It is to be filled with cubes measuring 2cm in length.
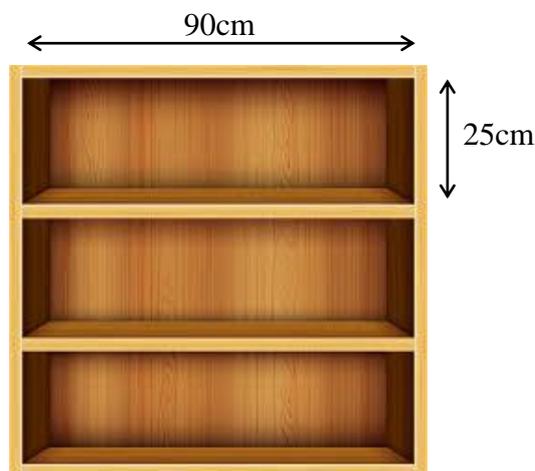

2cm

a) What is the most number of cubes that will fit along the length?
b) What is the most number of cubes that will fit along the breadth?
c) What is the most number of cubes that will fit along the height?
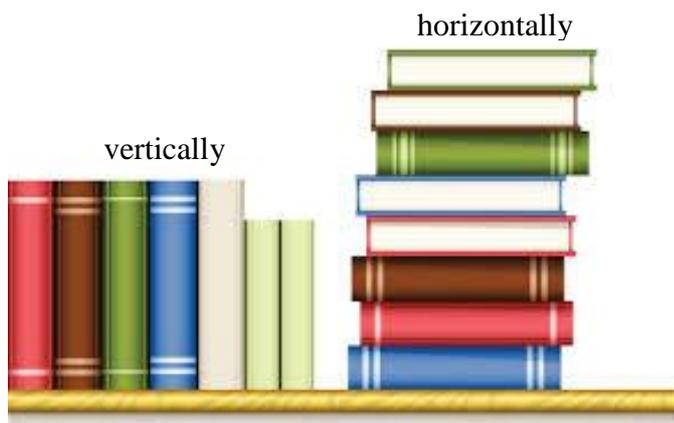**d)** Hence, what is the most number of cubes that will fit inside the cuboid?

10) A book has a length of 23cm, a width of 18cm and a depth of 3cm as shown below.

Nikki has many of these books and wants to stack them in a book shelf as shown below. It has 3 shelves each with a length of 90cm and a height of 25cm.

The books can be stacked either horizontally or vertically as shown below.

a) What is the most number of books that will fit into the book shelf if they are to be placed vertically?
b) What is the most number of books that will fit into the book shelf if they are to be placed horizontally?
c) Which way should Nikki stack the books to get the most number in the book shelf?