

1 Rosie, Matilda and Ibrahim collect stickers.

$$\begin{array}{l} \text{number of stickers} \\ \text{Rosie has} \end{array} : \begin{array}{l} \text{number of stickers} \\ \text{Matilda has} \end{array} : \begin{array}{l} \text{number of stickers} \\ \text{Ibrahim has} \end{array} = 4:7:15$$

Ibrahim has 24 more stickers than Matilda.

Ibrahim has more stickers than Rosie.

How many more?

.....

(Total for Question 1 is 3 marks)

2 In the Northern hemisphere the ratio of the area of land to the area of water is 2:3

(a) Work out what percentage of the area of the Northern hemisphere is land.

.....%
(2)

20% of the area of the Southern hemisphere is land.

(b) Work out the ratio of the area of land to the area of water in the Southern hemisphere.

.....
(2)

(Total for Question 2 is 4 marks)

3 Natalie makes potato cakes in a restaurant.

She mixes potato, cheese and onion so that

weight of potato : weight of cheese : weight of onion = 9 : 2 : 1

Natalie needs to make 6000 g of potato cakes.

Cheese costs £2.25 for 175 g.

Work out the cost of the cheese needed to make 6000 g of potato cakes.

£.....

(Total for Question 3 is 4 marks)

4 The points L , M and N are such that LMN is a straight line.

The coordinates of L are $(-3, 1)$

The coordinates of M are $(4, 9)$

Given that $LM : MN = 2 : 3$,

find the coordinates of N .

(..... ,)

(Total for Question 4 is 4 marks)

- 5 There are 240 cans of drink on a shelf.
Each can contains cola or lemonade or orange.

$$\frac{\text{the number of cans of cola}}{\text{the number of cans of lemonade}} : \frac{\text{the number of cans of lemonade}}{\text{the number of cans of orange}} = 5:3:2$$

$\frac{1}{2}$ of the cans of lemonade and $\frac{1}{12}$ of the cans of orange are removed from the shelf.

Work out the number of cans of cola as a percentage of the total number of cans of drink remaining on the shelf.

.....%

(Total for Question 5 is 5 marks)

6 Rizwan writes down three numbers a , b and c

$$a:b = 1:3$$

$$b:c = 6:5$$

(a) (i) Find $a:b:c$

.....
(2)

(ii) Express a as a fraction of the total of the three numbers a , b and c

.....
(2)

Emma writes down three numbers m , n and p

$$n = 2m$$

$$p = 5n$$

(b) Find $m:p$

.....
(2)

(Total for Question 6 is 6 marks)