

N175 Ratio 3

Q1.

Ali, Ben and Cathy share an amount of money in the ratio 6 : 9 : 10

What fraction of the money does Ben get?

.....

(Total for question = 2 marks)

Q2.

There are only red buttons, yellow buttons and orange buttons in a jar.

The number of red buttons, the number of yellow buttons and the number of orange buttons are in the ratio 7 : 4 : 9

Work out what percentage of the buttons in the jar are orange.

..... %

(Total for question = 2 marks)

Q3.

Annie and Lily share some money in the ratio 4 : 3

(a) What fraction of the money does Lily get?

.....
(1)

Rosie and Dan share some sweets.

Dan gets $\frac{1}{4}$ of the sweets.

(b) Write down the ratio of the number of sweets Rosie gets to the number of sweets Dan gets.

.....
(1)

(Total for question = 2 marks)

Q4.

Colin, Dave and Emma share some money.

Colin gets $\frac{3}{10}$ of the money.

Emma and Dave share the rest of the money in the ratio 3 : 2

What is Dave's share of the money?

(Total for question = 4 marks)

Q5.

Gavin, Harry and Isabel each earn the same monthly salary.

Each month,

Gavin saves 28% of his salary and spends the rest of his salary

Harry spends $\frac{3}{4}$ of his salary and saves the rest of his salary
the amount of salary Isabel saves : the amount of salary she spends = 3:7

Work out who saves the most of their salary each month.

You must show how you get your answer.

(Total for question = 4 marks)

Q6.

In a company, the ratio of the number of men to the number of women is 3:2

40% of the men are under the age of 25

10% of the women are under the age of 25

What percentage of all the people in the company are under the age of 25?

..... %

(Total for question = 4 marks)

Q7.

There are 165 counters in a bag.

Each counter is either black or white.

There are twice as many black counters as white counters in the bag.

Martine takes 40% of the black counters from the bag.

Work out the ratio of the number of black counters to the number of white counters now in the bag. Give your ratio in its simplest form.

.....
(Total for question = 4 marks)

Q8.

Daniel bakes 420 cakes.

He bakes only vanilla cakes, banana cakes, lemon cakes and chocolate cakes.

$\frac{2}{7}$ of the cakes are vanilla cakes.

35% of the cakes are banana cakes.

The ratio of the number of lemon cakes to the number of chocolate cakes is 4:5

Work out the number of lemon cakes Daniel bakes.

.....
(Total for question = 5 marks)

Q9.

Alan, Bispah and Chan share a sum of money.

Alan gets $\frac{1}{8}$ of the money.

Bispah gets $\frac{1}{2}$ of the money.

Chan gets the rest of the money.

Alan gets £2.50

(a) Work out how much money Bispah gets.

£
(2)

(b) Find the ratio

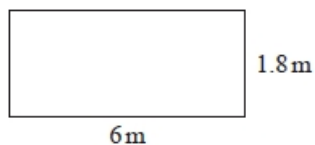
amount of money Alan gets : amount of money Chan gets
Give your answer in the form $a : b$ where a and b are whole numbers.

.....
(3)

(Total for question = 5 marks)

Q10.

The diagram shows a rectangular wall.



Frank is going to cover the wall with rectangular tiles.
Each tile is 60 cm by 30 cm.

$\frac{3}{5}$ of the tiles will be white.

Some of the tiles will be green.
The rest of the tiles will be blue.

The ratio of the number of green tiles to the number of blue tiles will be 1 : 3

(a) Assuming there are no gaps between the tiles, how many tiles of each colour will Frank need?

white tiles
green tiles
blue tiles
(5)

Frank is told that he should leave gaps between the tiles.

(b) If Frank leaves gaps between the tiles, how could this affect the number of tiles he needs?

.....
.....

(1)

(Total for question = 6 marks)

Q11.

Given that

$$(x + 2) : 2 = (6x - 8) : x$$

find the possible values of x .

.....
(Total for question = 5 marks)

Q12.

The ratio $(y + x) : 2x$ is equivalent to $k : 1$

Show that $y = x(2k-1)$

(Total for question = 3 marks)

Q13.

Given that

$$x^2 : (2x + 6) = 2 : 1$$

find the possible values of x .

.....
(Total for question = 4 marks)

Q14.

A group of people went to a restaurant.
Each person chose one starter and one main course.

starter	main course
soup	lasagne
prawns	curry

the number of people who chose soup : the number of people who chose prawns = 2 : 3

Of those who chose soup,
the number of people who chose lasagne : the number of people who chose curry = 5 : 3

Of those who chose prawns,
the number of people who chose lasagne : the number of people who chose curry = 1 : 5

What fraction of the people chose curry?
You must show how you get your answer.

.....
(Total for question = 4 marks)