

4/5 Mark Exam Style Questions on Percentages, Fractions and Ratios – Year 11 – 6/10/2017

READ THE QUESTION, FIND THE MATHS, SET UP YOUR ANSWER, DO THE MATHS, CHECK IT IS A SENSIBLE ANSWER

Non Calculator Section

(1) Fred has total of 30 coins. The coins are either £1, 50p or 20p coins.

10% of the coins are £1 coins.

$\frac{2}{5}$ of the coins are 50p coins.

The rest of the coins are 20p coins.

Find the TOTAL amount of money Fred has.

(2) Sue has 28 coins. The coins are either £2 coins or £1 coins. The ratio of £2 coins to £1 coins is 3:4.

(a) Find out how many of each coin she has.

(b) Find the total amount of money she has.

(3) Bob is making some cakes. The total weight of the cake mix is 500g.

15% of the mix is sugar

$\frac{3}{10}$ of the mix is flour

The rest of the mix is made up of eggs and milk. What is the total weight of the eggs and milk in the mix?

(4) In a class in Year 11 there ratio of boys to girls is 2:3. There are a total of 16 boys in the class.

(a) Find the number of girls in the class.

(b) Explain why exactly 10% of the boys in the class can't be chosen to play in the football team.

(5) James receives his energy bill. The bill is made up of his gas bill and his electricity bill. The total bill comes to £54.

$\frac{9}{10}$ of James' usage was electricity.

How much was James charged for the gas he used.

Calculator Section

(1) Colin receives a bill for his phone and broadband use. The total bill was £324 for the year.

47% of the bill was for phone use.

The rest of the bill was for broadband use.

(a) Find out how much Colin was charged for his phone use.

(b) Find out how much Colin was charged for his broadband use.

(2) Jim was given some money by his granddad. He spends $\frac{4}{5}$ of the money on clothes and he saves the rest.

Of the remaining money, Jim gives 10% to his sister.

Given that Jim SPENT £80, find out how much money he gave his sister.

(3) Jenny and Rob share some money in the ratio 3:5. Rob has a total of £36.24 MORE than Jenny.

Find 23% of Jenny's share.

(4) Students at a school could choose to play one of 3 sports on sports day. The students could choose from football, rugby or tennis.

$\frac{3}{7}$ of a school said they wanted to play football.

423 students said they wanted to play football.

Of the student who DIDN'T like to play football, $\frac{1}{3}$ liked to play rugby.

How many students wanted to play rugby?

(5) An office has men and women in the ratio 5:6

There are 120 women in the office.

68% of the men in the office liked beer.

How many men in the office liked beer?