

**Ratio, percentages, fractions and decimals overview! Wordy Questions – www.m4ths.com**

(1) Given that  $\frac{4}{5}$  of a number is 16, find 75% of the number.

(2) A school has 200 students in total spread over years 7, 8, 9, 10 and 11. In the school 0.2 of the students are in year 7 and  $\frac{3}{8}$  of the students are in year 8. The **remaining** students are spread across year 9, 10 or 11 in the ratio 6:4:7. How many students are in year 11 at the school?

(3) Bob is making a cake using flour, sugar, milk and cocoa. Flour makes up 65% of the cakes ingredients, sugar 0.15, milk  $\frac{1}{10}$  and the remaining amount of the cake is made from cocoa. Given that the ingredients weight 800g in total, how many grams of cocoa should Bob use to make the cake?

(4) Fred and Jane win some money and share it in the ratio 3:4. Fred has a total of £24. When Jane receives her share she gives 15% of it to charity. How much money does Jane give to charity?

(5) Sally has 0.35 of her grandfather's inheritance money. He leaves a total of £2000. If she gives away  $\frac{5}{7}$  of her share how much will she have left?

(6) Tim earns £21000 a year. He has a pay rise of 10%. He decides to give 12% of his new annual salary to his son. How much money will he give to his son?

(7) A petrol tank has 24 gallons in and is currently  $\frac{2}{3}$  full. Given that petrol costs £6 a gallon, how much would it cost to fill 3 whole petrol tanks from empty?

(8) £48 is shared in the ratio 4:3:1. Kevin has the largest share. Find 30% of Kevin's share.

(9) 9 identical pens cost £2.70. A company offers a bulk deal of '15% off for purchases of 500 pens or more'. Find the total cost of buying 600 pens.

(10) Peter and Jill are having a debate. Peter says 0.27 of £420 is greater than 35% of £510. Jill believes he is wrong. Is Peter right or is Jill right? *You must show workings.*