

**PERCENTAGE PROBLEMS I**

- 1) Write the following percentages as decimals:  
(a) 28%    (b) 7%    (c)  $17\frac{1}{2}\%$     (d) 120%    (e) 37.2%    (f)  $6\frac{1}{4}\%$
- 2) Write the following percentages as fractions in their lowest terms:  
(a) 35%    (b)  $12\frac{1}{2}\%$     (c)  $33\frac{1}{3}\%$     (d) 8%    (e)  $62\frac{1}{2}\%$     (f) 140%
- 3) Write the following fractions as percentages:  
(a)  $\frac{17}{40}$     (b)  $\frac{3}{8}$     (c)  $\frac{11}{16}$     (d)  $\frac{5}{6}$     (e)  $\frac{13}{37}$     (f)  $2\frac{1}{4}$
- 4) If 42% of the voters in an election voted for the Green Party, and 13650 people voted, how many votes were cast for the Green Party?
- 5) Of 1200 employees in a factory, 80 were absent today. What percentage were absent?
- 6) A man gives 8% of his monthly income to charity. If he earns £1825 per month, how much does he give to charity?
- 7) Each day (Monday to Friday) a girl arrives at school at 8.30am, and leaves at 4.00pm.  
(a) How many hours per week does she spend at school?  
(b) How many hours are there in a week?  
(c) What percentage of her week does the girl spend at school?
- 8) A company which sells tables for £380 breaks down the price as follows: Materials 27.3%; Labour 46.2%; Overheads 8.7%; and the rest is profit- Find the amount spent on materials, on labour and on overheads, and the amount of profit made.
- 9) If 12% of the pupils in a school are left-handed, and there are 625 pupils, how many are left-handed?
- 10) Out of my weekly income of £362, I manage to save £25. What percentage of my income do I save?
- 11) A survey in a school showed that 382 pupils came by bus, 235 by car, 184 by bike, and 279 walked. None came by any other means. Find what percentage came by each means of travel.
- 12) An estate agent charges 1.5% commission on the sale of a house. What is the estate agent's fee for selling a house for £294000?
- 13) A bathroom suite is advertised at £239 + VAT. If the rate of VAT is  $17\frac{1}{2}\%$ , find:  
(a) the amount of VAT    (b) the total price of the suite.
- 14) A town had 16400 inhabitants in 1981. If the population of the town decreases by 18.5% over the next 10 years, find:  
(a) How many fewer people- there were in 1991.  
(b) The population of the town in 1991
- 15) A circle of diameter 12cm is cut from a piece of card 12cm square. Find:  
(a) the area of card wasted    (b) the percentage of the card which is wasted.

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- 2) Write the following percentages as fractions in their lowest terms:  
(a) 35%    (b) 122%    (c)  $33\frac{1}{3}\%$     (d) 8%    (e)  $62\frac{1}{2}\%$     (f) 140%
- 3) Write the following fractions as percentages:  
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