

 chapter 5 review

1. (a) ✎ Express 5 as a percentage of 160.
  - (b) ✎ Find 7% of each of the following numbers:  
(i) 56      (ii) 250      (iii) 125 000
  - (c) ✎ 25% of all customers in a shop received a free copy of the newspaper the *Irish Examiner*.  
30% of the customers got a 10% reduction in the price of the newspaper.  
All other customers who bought the newspaper paid the full price.  
180 customers paid the full price.
    - (i) Find the number of customers who received a free copy.
    - (ii) Find the number of customers who bought the newspaper at a reduced price.
    - (iii) If the full price of the *Irish Examiner* is €1.20, find the total amount of money taken in by the shop from selling the paper.
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2. (a) ✎ Express 30% as a fraction and as a decimal.
  - (b) ✎ Add 20% of 500 to 25% of 600.
  - (c) ✎ 4% of votes in a student election were spoiled. If 90% of the school's 720 students voted, find the number of spoiled votes.
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3. (a) ✎ Change 0.25 and 0.025 into percentages.
  - (b) ✎ James scored 42 out of 75 in his science test, 15 out of 25 in his maths test and 78 out of 120 in his French test. Find his percentage mark for each test.
  - (c) ✎ The price of a computer game increased from €30 to €36.
    - (i) Find the percentage increase.
    - (ii) A month later in a sale, the new price was decreased by 5%.  
What was the price of the game in the sale?

4. (a)  $\pounds$  On a bank holiday weekend, the prize fund in the Lotto was increased from €2 million to €2.5 million. Find the percentage increase in the prize fund.
- (b)  $\pounds$  Find the total if 32% of 53 is added to 5% of 53.
- (c)  $\pounds$  In the Government budget, child benefit was to be increased by 2.5% in January and by a further 2% in June. Find the total increase, in euro, if before the budget child benefit was €60.
5. (a)  $\pounds$  In a factory producing mobile phones, 3 out of every 500 phones were faulty. Find the percentage number of faulty phones.
- (b)  $\pounds$  There were 18 cars in a car park. One was green, five were blue, ten were silver and two were black. Find the percentage, to the nearest whole number, of each car colour in the car park.
- (c)  $\pounds$  A bar of chocolate costs €0.75. Three of these bars are offered in a pack, at a price of €1.99. What is the percentage saving, correct to the nearest whole number, in buying the pack of three bars, rather than three separate bars?
6. (a)  $\pounds$  Express €3 as a percentage of €48.
- (b)  $\pounds$  Increase 250 by 2.5% and add the result to 5% of 1500.
- (c)  $\pounds$  A type of wood expands in length by 0.01% per metre for every 1 °C rise in temperature. Find how much a length of 300 metres of this wood would increase if the temperature increased by 10 °C.