

Calculators permitted but all working needs to be shown.**Essential knowledge:**

1. Simplify the ratios: (a) 4 : 20 (b) 6 : 9 (c) 1.5 : 2.5
2. Share £40 in the ratio of 2 : 3
3. (a) If 12 bottles of water cost £9.60, how much would 10 cost?
(b) It takes 3 people 10 hours to build a wall. At the same rate, how long would it take 5 people to build the same wall?
4. Jack exchanged £2000 into Australian Dollars. The exchange rate was £1 = AU\$1.58. How much did Jack receive?

Unit level:

5. A candle of height 75mm burns for 180 minutes. How long will a 40mm candle burn for?
6. Lauren went to USA and took 250\$ with her. She spent an average of 25\$ on each of the 7 days she was there. On her return home, she changed her remaining Dollars back to Pounds Sterling. The bank would only change the money in multiples of 10\$ (£1 = 1.47\$) How much, in Pounds Sterling, will Lauren get for her remaining Dollars? **Give your answer to the nearest penny.**
- 7.(a) A ferry has 360 seats but 3 grades of seating - Class A seats, class B seats and Class C seats. The price of the seats A:B:C is in the ratio 3:2:1. If a class C seat costs £10, what is the cost of Class A and class B seats?
(b) If the ferry was full and the number of seats is given by the ratio 2:5:5, how much money was taken by the ferry company?

Assessment level:

8. To make 14 carat gold, copper and pure gold are mixed in the ratio 5:7. A jeweller has 160 g of copper and 245g of pure gold. What is the maximum weight of 14 carat gold that the jeweller can make?
9. In the 1st half of 2012, the pound was lowest in March (£1=1.1984 €) and highest in July (£1=1.2637 €). How many **more** euros would you receive for £500 using these rates?
10. If it takes 12 people, 20 days to erect a fence, how many more people would be needed to get the job done 5 days earlier?