

ARITHMETIC (Q 1, PAPER 1)

2011

- 1. (a)** Aoife and Brian share a prize fund in the ratio 4:3. Aoife gets €56.
- (i)** Find the total prize fund.
 - (ii)** How much does Brian get?
- (b)** The cost of staying for three nights in a hotel in England is £231 sterling.
- (i)** Find that cost in euro, given that €1 = £0.88 sterling?
 - (ii)** This cost is 5% more than the cost a year ago.
Find, in euro, the cost a year ago.
- (c)** The speedometer in a car is faulty. When the car is actually travelling at 57 km/h, the speedometer reads 60 km/h.
- (i)** Calculate the percentage error, correct to one decimal place.
 - (ii)** If the percentage error is the same at all speeds, at what speed is the car actually travelling when the speedometer reads 110 km/h?
Give your answer correct to one decimal place.
 - (iii)** The driver is not aware of the fault. He calculates that if he travels at an average speed of 80 km/h as shown on the speedometer, he will reach his destination in four hours.
How long, correct to the nearest minute, will it actually take him to reach his destination?

ANSWERS

- 1 (a) (i) €98 (ii) €42
(b) (i) €262.50 (ii) €250
(c) (i) 5.3% (ii) 104.5 km/h (iii) 4 hours 13 mins.