

IGCSE – Ratio/percentages/time/exchange rates/speed

Oct 03 Paper 4

- 1 A train starts its journey with 240 passengers.
144 of the passengers are adults and the rest are children.
- (a) Write the ratio Adults : Children in its lowest terms. [2]
- (b) At the first stop, $37\frac{1}{2}\%$ of the adults and $\frac{1}{3}$ of the children get off the train.
20 adults and x children get onto the train.
The total number of passengers on the train is now 200.
- (i) How many children got off the train? [1]
- (ii) How many adults got off the train? [1]
- (iii) How many **adult** passengers are **on** the train as it sets off again? [1]
- (iv) What is the value of x ? [1]
- (c) After a second stop, there are 300 passengers on the train and the ratio
Men : Women : Children is 6 : 5 : 4.
Calculate the number of children now on the train. [2]
- (d) On Tuesday the train journey took 7 hours and 20 minutes and began at 13 53.
- (i) At what time did the train journey end? [1]
- (ii) Tuesday's time of 7 hours 20 minutes was 10% more than Monday's journey time.
How many minutes longer was Tuesday's journey? [2]

Oct 05 Paper 4

- 1 A Spanish family went to Scotland for a holiday.
- (a) The family bought 800 pounds (£) at a rate of £1 = 1.52 euros (€).
How much did this cost in euros? [1]
- (b) The family returned home with £118 and changed this back into euros.
They received €173.46.
Calculate how many euros they received for each pound. [1]
- (c) A toy which costs €11.50 in Spain costs only €9.75 in Scotland.
Calculate, as a percentage of the cost in Spain, how much less it costs in Scotland. [2]
- (d) The total cost of the holiday was €4347.00.
In the family there were 2 adults and 3 children.
The cost for one adult was double the cost for one child.
Calculate the cost for one child. [2]
- (e) The **original** cost of the holiday was **reduced** by 10% to €4347.00.
Calculate the original cost. [2]
- (f) The plane took 3 hours 15 minutes to return to Spain.
The length of this journey was 2350 km.
Calculate the average speed of the plane in
- (i) kilometres per hour, [2]
- (ii) metres per second. [1]