

Proportion

Question Paper

Level	OCR
Subject	Maths
Exam Board	GCSE (9-1)
Topic	Ratio, Proportion and Rates of Change
Sub Topic	Proportion
Grade Level	Grade 3
Booklet	Question Paper

Time Allowed: 34 minutes

Score: /28

Percentage: /100

1 It takes John 45 minutes to walk 5 km.

(a) How long would it take John to walk 9 km at the same speed?

(a) _____ minutes [2]

(b) Calculate John's speed in kilometres per hour.
Give your answer to an appropriate degree of accuracy.

(b) _____ km/h [3]

2 This table shows information about two brands of cereal, *Corny Flakes* and *Super Fibre*.

	<i>Corny Flakes</i> (per 30 g)	<i>Super Fibre</i> (per 100 g)
Energy	180 kcal	357 kcal
Sugar	6.3 g	27.7 g
Fat	0.9 g	9.4 g
Fibre	0.9 g	8.4 g
Salt	0.3 g	0.1 g

The makers of *Super Fibre* claim that it is healthier than other cereals because it contains more fibre, less sugar, less fat and less salt than other cereals.

Use the information in the table to check if the claims are true.

- 3 Tony's car will travel 42 miles on one gallon of petrol.
One day he filled up his car with petrol costing 121.9p per litre.
He then went on a 70 mile journey.

Calculate the cost of the petrol used on this journey.
Use 1 gallon = 4.5 litres and show your method clearly.

£ _____ [4]

4 (a) At the supermarket, Sue bought 2.4 kg of apples and 1.9 kg of oranges.

She paid for these with a £20 note and received £12.66 change.

Given that the apples cost £1.95 per kilogram, work out the cost per kilogram of the oranges.

(a) £ per kilogram [3]

(b) In a survey of 209 people at the supermarket, 83% said that the fruit being sold was of excellent quality.

How many of the 209 people could have said that the fruit was of excellent quality?

(b) [3]

5 Mark is organising a party for his group of 17 Scouts.

(a) (i) Each Scout will need $\frac{3}{4}$ of a pizza.

How many pizzas should Mark buy?

(a)(i) _____ [3]

(ii) The pizzas normally cost £2.60 each.
Mark is given a discount of 15% off this price.

How much does Mark pay for each pizza?

(ii) £ _____ [3]

(b) The area of the base of a can of lemonade is 32.4 cm^2 .

What is this area in mm^2 ?

(b) _____ mm^2 [2]