



Percentages

Question Paper 1

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Percentages
Booklet	Question Paper 1

Time Allowed: 66 minutes

Score: /55

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

- 1 From a sample of 80 batteries, 3 are faulty.

Work out the percentage of faulty batteries.

..... % [1]

- 2 (a) Kristian and Stephanie share some money in the ratio 3 : 2.
Kristian receives \$72.

(i) Work out how much Stephanie receives.

\$ [2]

(ii) Kristian spends 45% of his \$72 on a computer game.

Calculate the price of the computer game.

\$ [1]

(iii) Kristian also buys a meal for \$8.40 .

Calculate the fraction of the \$72 Kristian has left after buying the computer game and the meal.
Give your answer in its lowest terms.

..... [2]

(iv) Stephanie buys a book in a sale for \$19.20 .
This sale price is after a reduction of 20%.

Calculate the original price of the book.

- (b) Boris invests \$550 at a rate of 2% per year simple interest.

Calculate the amount Boris has after 10 years.

\$ [3]

- (c) Marlene invests \$550 at a rate of 1.9% per year compound interest.

Calculate the amount Marlene has after 10 years.

\$ [2]

- (d) Hans invests \$550 at a rate of $x\%$ per year compound interest.
At the end of 10 years he has a total amount of \$638.30, correct to the nearest cent.

Find the value of x .

- 3 12 000 vehicles drive through a road toll on one day.
The ratio cars : trucks : motorcycles = 13 : 8 : 3.

(a) (i) Show that 6500 cars drive through the road toll on that day.

Answer(a)(i)

[1]

(ii) Calculate the number of trucks that drive through the road toll on that day.

Answer(a)(ii) [1]

(b) The toll charges in 2014 are shown in the table.

Vehicle	Charge
Cars	\$2
Trucks	\$5
Motorcycles	\$1

Show that the total amount paid in tolls on that day is \$34 500.

Answer(b)

- (c) This total amount is a decrease of 8% on the total amount paid on the same day in 2013.
Calculate the total amount paid on that day in 2013.

Answer(c) \$ [3]

- (d) 2750 of the 6500 car drivers pay their toll using a credit card.

Write down, in its simplest terms, the fraction of car drivers who pay using a credit card.

Answer(d) [2]

- (e) To the nearest thousand, 90 000 cars drive through the road toll in one week.

Write down the lower bound for this number of cars.

Answer(e) [1]

- 4 Robert buys a car for \$8000.
At the end of each year the value of the car has decreased by 10% of its value at the beginning of that year.

Calculate the value of the car at the end of 7 years.

Answer \$ [2]

- 5 Jasjeet and her brother collect stamps.
When Jasjeet gives her brother 1% of her stamps, she has 2475 stamps left.

Calculate how many stamps Jasjeet had originally.

Answer [3]

- 6 (a) Kolyan buys water for \$2.60 .
He also buys biscuits.

- (i) The ratio cost of biscuits : cost of water = 3 : 2.

Find the cost of the biscuits.

Answer(a)(i) \$..... [2]

- (ii) Kolyan has \$9 to spend.

Work out the total amount Kolyan spends on water and biscuits as a fraction of the \$9.
Give your answer in its lowest terms.

Answer(a)(ii) [2]

- (iii) The \$9 is 62.5% less than the amount Kolyan had to spend last week.

Calculate the amount Kolyan had to spend last week.

Answer(a)(iii) \$..... [3]

- (b) Priya buys a bicycle for \$250.
Each year the value of the bicycle decreases by 8% of its value at the beginning of that year.

Calculate the value of Priya's bicycle after 10 years.
Give your answer correct to the nearest dollar.

www.megalecture.com

Answer(b) \$..... [3]

7 Jaideep builds a house and sells it for \$450 000.

(a) He pays a tax of 1.5% of the selling price of the house.

Show that he pays \$6750 in tax.

Answer(a)

[1]

(b) \$6750 is 12.5% more than the tax Jaideep paid on the first house he built.

Calculate the tax Jaideep paid on the first house he built.

Answer(b) \$ [3]

(c) The house is built on a rectangular plot of land, 21 m by 17 m, both correct to the nearest metre.

Calculate the upper bound for the area of the plot.

Answer(c) m² [2]

(d) On a plan of the house, the area of the kitchen is 5.6 cm².

The scale of the plan is 1:200.

Calculate the actual area of the kitchen in square metres.

Answer(d) m² [2]

- (e) The house was built using cuboid blocks each measuring 12 cm by 16 cm by 27 cm.

Calculate the volume of one block.

Answer(e) cm³ [2]

- (f) Jaideep changes \$12 000 into euros (€) to buy land in another country.
The exchange rate is €1 = \$1.33 .

Calculate the number of euros Jaideep receives.
Give your answer correct to the nearest euro.

Answer(f) €..... [3]