



Percentages

Question Paper 3

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Percentages
Booklet	Question Paper 3

Time Allowed: 60 minutes

Score: /50

Percentage: /100

Grade Boundaries:

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

1 A tennis club has 560 members.

(a) The ratio men : women : children = 5 : 6 : 3.

(i) Show that the club has 240 women members.

Answer(a)(i)

[2]

(ii) How many members are children?

Answer(a)(ii) [1]

(b) $\frac{5}{8}$ of the 240 women members play in a tournament.

How many women members do **not** play in the tournament?

Answer(b) [2]

(c) The annual membership fee in 2013 is \$198 for each adult and \$75 for each child.

(i) Calculate the total amount the 560 members pay in 2013.

Answer(c)(i) \$ [2]

(ii) The adult fee of \$198 in 2013 is 5.6% more than the fee in 2012.

Calculate the adult fee in 2012.

- (d) The club buys 36 tennis balls for \$9.50 and sells them to members for \$0.75 each.

Calculate the percentage profit the club makes.

Answer(d) % [3]

- (e) A tennis court is a rectangle with length 23.7 m and width 10.9 m, each correct to 1 decimal place.

Calculate the upper and lower bounds of the perimeter of the court.

Answer(e) Upper bound m

Lower bound m [3]

- 2 The Tiger Sky Tower in Singapore has a viewing capsule which holds 72 people. This number is 75% of the population of Singapore when it was founded in 1819. What was the population of Singapore in 1819?

Answer [2]

- 3 Maria pays \$84 rent.
The rent is increased by 5%.

Calculate Maria's new rent.

Answer \$ [2]

4 (a) The Martinez family travels by car to Seatown.
The distance is 92 km and the journey takes 1 hour 25 minutes.

(i) The family leaves home at 07 50.
Write down the time they arrive at Seatown.

Answer(a)(i) [1]

(ii) Calculate the average speed for the journey.

Answer(a)(ii) km/h [2]

(iii) During the journey, the family stops for 10 minutes.
Calculate 10 minutes as a percentage of 1 hour 25 minutes.

Answer(a)(iii) % [1]

(iv) 92 km is 15% more than the distance from Seatown to Deecity.
Calculate the distance from Seatown to Deecity.

Answer(a)(iv) km [3]

(b) The Martinez family spends \$150 in the ratio

$$\text{fuel} : \text{meals} : \text{gifts} = 11 : 16 : 3.$$

(i) Show that \$15 is spent on gifts.

Answer (b)(i)

[2]

(ii) The family buys two gifts.
The first gift costs \$8.25.

Find the ratio

$$\text{cost of first gift} : \text{cost of second gift}.$$

Give your answer in its simplest form.

Answer(b)(ii) : [2]

5 The taxi fare in a city is \$3 **and** then \$0.40 for every kilometre travelled.

(a) A taxi fare is \$9.

How far has the taxi travelled?

Answer(a) km [2]

(b) Taxi fares cost 30% more at night.

How much does a \$9 daytime journey cost at night?

- 6 (a) In a sale, Jen buys a laptop for \$351.55.
This price is 21% less than the price before the sale.

Calculate the price before the sale.

Answer(a) \$ [3]

- (b) Alex invests \$4000 at a rate of 8% per year simple interest for 2 years.
Bob invests \$4000 at a rate of 7.5% per year compound interest for 2 years.

Who receives more interest and by how much?

Answer(b) receives \$ more interest. [6]

7 Maria decides to increase her homework time of 8 hours per week by 15%.

Calculate her new homework time.
Give your answer in hours and minutes.

Answer h min [3]

8 During a marathon race an athlete loses 2% of his mass.
At the end of the race his mass is 67.13 kg.

Calculate his mass before the race.

Answer kg [3]