



# Percentages

## Question Paper 4

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Percentages
Booklet	Question Paper 4

**Time Allowed:** 59 minutes

**Score:** /49

**Percentage:** /100

**Grade Boundaries:**

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

1 A concert hall has 1540 seats.

Calculate the number of people in the hall when 55% of the seats are occupied.

*Answer* ..... [1]

2 Amalie makes a profit of 20% when she sells a shirt for \$21.60.

Calculate how much Amalie paid for the shirt.

*Answer* \$ ..... [2]

- 3 (a) In 2008 the total number of tickets sold for an athletics meeting was 3136.  
The ratio child tickets sold : adult tickets sold = 17 : 32.

(i) How many child tickets were sold?

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

(ii) Child tickets cost \$2 each and adult tickets cost \$4.50 each.

Show that the total amount received from the sale of the tickets in 2008 was \$11 392.

Answer(a)(ii)

[2]

(b) In 2009 the amount received from the sale of tickets for the athletics meeting was \$12 748.

Calculate the percentage increase in the amount received from 2008 to 2009.

Answer(b) ..... % [3]

(c) In 2008 the amount of \$11 392 was 28% more than the amount received in 2007.

Calculate how much was received in 2007.

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

- 4 (a) Hansi and Megan go on holiday.  
The costs of their holidays are in the ratio Hansi : Megan = 7 : 4.  
Hansi's holiday costs \$756.  
Find the cost of Megan's holiday.

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

- (b) In 2008, Hansi earned \$7800.

- (i) He earned 15% more in 2009.  
Calculate how much he earned in 2009.

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

- (ii) In 2010, he earns 10% more than in 2009.  
Calculate the percentage increase in his earnings from 2008 to 2010.

Answer(b)(ii) ..... % [3]

- (c) Megan earned \$9720 in 2009. This was 20% more than she earned in 2008.  
How much did she earn in 2008?

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

- (d) Hansi invested \$500 at a rate of 4% per year **compound** interest.  
Calculate the final amount he had after three years.

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

5 Alberto and Maria share \$240 in the ratio 3 : 5.

(a) Show that Alberto receives \$90 and Maria receives \$150.

*Answer(a)*

[1]

(b) (i) Alberto invests his \$90 for 2 years at  $r\%$  per year **simple** interest.  
At the end of 2 years the amount of money he has is \$99.  
Calculate the value of  $r$ .

*Answer(b)(i)*  $r =$  ..... [2]

(ii) The \$99 is 60% of the cost of a holiday.  
Calculate the cost of the holiday.

*Answer(b)(ii)* \$ ..... [2]

(c) Maria invests her \$150 for 2 years at 4% per year **compound** interest.  
Calculate the exact amount Maria has at the end of 2 years.

*Answer(c)* \$ ..... [2]

(d) Maria continues to invest her money at 4% per year **compound** interest.  
After 20 years she has \$328.67.

(i) Calculate exactly how much more this is than \$150 invested for 20 years at 4% per year **simple** interest.

*Answer(d)(i)* \$ ..... [3]

(ii) Calculate \$328.67 as a percentage of \$150.

*Answer(d)(ii)* .....% [2]

6 Daniella is 8 years old and Edward is 12 years old.

(a) Their parents give them some money in the ratio of their ages.

(i) Write the ratio Daniella's age : Edward's age in its simplest form.

Answer(a)(i) ..... : ..... [1]

(ii) Daniella receives \$30.  
Show that Edward receives \$45.

Answer(a)(ii)

[1]

(iii) What percentage of the total amount of money given by their parents does Edward receive?

Answer(a)(iii) ..... % [2]

(b) Daniella invests her \$30 at 3% per year, **compound** interest.  
Calculate the amount Daniella has after 2 years.  
Give your answer correct to 2 decimal places.

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

(c) Edward also invests \$30.  
He invests this money at a rate of  $r\%$  per year, **simple** interest.  
After 5 years he has a total amount of \$32.25.  
Calculate the value of  $r$ .

Answer(c)  $r =$  ..... [2]

- 7 In 1970 the population of China was  $8.2 \times 10^8$ .  
In 2007 the population of China was  $1.322 \times 10^9$ .  
Calculate the population in 2007 as a percentage of the population in 1970.

*Answer* ..... % [2]

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