

Number

Difficulty: Medium

Question Paper 4

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Number
Paper	Paper 4
Difficulty	Medium
Booklet	Question Paper 4

Time allowed: 86 minutes

Score: /75

Percentage: /100

Grade Boundaries:

CIE IGCSE Maths (0580)

A*	A	B	C	D
>83%	67%	51%	41%	31%

CIE IGCSE Maths (0980)

9	8	7	6	5	4
>95%	87%	80%	69%	58%	46%

Question 1

(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? [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. [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. [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. [3]

Question 2

- (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. [2]
- (b) In 2008, Hansi earned \$7800.
- (i) He earned 15% more in 2009.
Calculate how much he earned in 2009. [2]
- (ii) In 2010, he earns 10% more than in 2009.
Calculate the percentage increase in his earnings from 2008 to 2010. [3]
- (c) Megan earned \$9720 in 2009. This was 20% more than she earned in 2008.
How much did she earn in 2008? [3]
- (d) Hansi invested \$500 at a rate of 4% per year **compound** interest.
Calculate the final amount he had after three years. [3]

Question 3

Thomas, Ursula and Vanessa share \$200 in the ratio

$$\text{Thomas} : \text{Ursula} : \text{Vanessa} = 3 : 2 : 5.$$

(a) Show that Thomas receives \$60 and Ursula receives \$40. [2]

(b) Thomas buys a book for \$21.
What percentage of his \$60 does Thomas have left? [2]

(c) Ursula buys a computer game for \$36.80 in a sale.
The sale price is 20% less than the original price.
Calculate the original price of the computer game. [3]

(d) Vanessa buys some books and some pencils.
Each book costs \$12 **more** than each pencil.
The total cost of 5 books and 2 pencils is \$64.20.
Find the cost of one pencil. [3]

Question 4

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

(a) Show that Alberto receives \$90 and Maria receives \$150. [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 . [2]

(ii) The \$99 is 60% of the cost of a holiday.
Calculate the cost of the holiday. [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. [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. [3]

(ii) Calculate \$328.67 as a percentage of \$150. [2]

Question 5

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. [1]

:

(ii) Daniella receives \$30.
Show that Edward receives \$45. [1]

(iii) What percentage of the total amount of money given by their parents does Edward receive? [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. [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 . [2]

Question 6

Marcus receives \$800 from his grandmother.

- (a) He decides to spend \$150 and to divide the remaining \$650 in the ratio
savings : holiday = 9 : 4.

Calculate the amount of his savings. [2]

- (b) (i) He uses 80% of the \$150 to buy some clothes.

Calculate the cost of the clothes. [2]

- (ii) The money remaining from the \$150 is $37\frac{1}{2}\%$ of the cost of a day trip to Cairo.

Calculate the cost of the trip. [2]

- (c) (i) Marcus invests \$400 of his savings for 2 years at 5 % per year **compound** interest.

Calculate the amount he has at the end of the 2 years. [2]

- (ii) Marcus's sister also invests \$400, at r % per year **simple** interest.
At the end of 2 years she has exactly the same amount as Marcus.

Calculate the value of r . [3]

Question 7

Beatrice has an income of \$40 000 in one year.

(a) She pays:

no tax on the first \$10 000 of her income;

10 % tax on the next \$10 000 of her income;

25 % tax on the rest of her income.

Calculate

(i) the total amount of tax Beatrice pays, [2]

(ii) the total amount of tax as a percentage of the \$40000. [2]

(b) Beatrice pays a yearly rent of \$10 800.

After she has paid her tax, rent and bills, she has \$12 000.

Calculate how much Beatrice spends on bills. [1]

(c) Beatrice divides the \$12 000 between shopping and saving in the ratio

$$\text{shopping} : \text{saving} = 5 : 3.$$

(i) Calculate how much Beatrice spends on shopping in one year. [2]

(ii) What fraction of the original \$40000 does Beatrice **save**?

Give your answer in its lowest terms. [1]

(d) The rent of \$10800 is an increase of 25 % on her previous rent.

Calculate her previous rent. [2]