

# Finance Problems

## Question Paper 2

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Finance Problems
Booklet	Question Paper 2

**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) Luc is painting the doors in his house.  
He uses  $\frac{3}{4}$  of a tin of paint for each door.

Work out the least number of tins of paint Luc needs to paint 7 doors.

Answer(a) ..... [3]

- (b) Jan buys tins of paint for \$17.16 each.  
He sells the paint at a profit of 25%.

For how much does Jan sell each tin of paint?

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

- (c) The cost of \$17.16 for each tin of paint is 4% more than the cost in the previous year.

Work out the cost of each tin of paint in the previous year.

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

- (d) In America a tin of paint costs \$17.16 .  
In Italy the same tin of paint costs €13.32 .  
The exchange rate is \$1 = €0.72 .

Calculate, in dollars, the difference in the cost of the tin of paint.



- (e) Paint is sold in cylindrical tins of height 11 cm.  
Each tin holds 750 ml of paint.

(i) Write 750 ml in  $\text{cm}^3$ .

Answer(e)(i) .....  $\text{cm}^3$  [1]

(ii) Calculate the radius of the tin.  
Give your answer correct to 1 decimal place.

Answer(e)(ii) ..... cm [3]

(iii) A mathematically similar tin has a height of 22 cm.  
How many **litres** of paint does this tin hold?

Answer(e)(iii) ..... litres [2]

(f) The mass of a tin of paint is 890 grams, correct to the nearest 10 grams.  
Work out the upper bound of the total mass of 10 tins of paint.

Answer(f) ..... g [1]

(g) The probability that a tin of paint is dented is 0.07 .  
Out of 3000 tins of paint, how many would you expect to be dented?

Answer(g) ..... [2]

(h) Tins of paint are filled at the rate of  $2 \text{ m}^3$  per minute.  
How many 750 ml tins of paint can be filled in 1 hour?

2 Jane and Kate share \$240 in the ratio 5 : 7 .

(a) Show that Kate receives \$140.

*Answer(a)*

[2]

(b) Jane and Kate each spend \$20.

Find the new ratio Jane's remaining money : Kate's remaining money.  
Give your answer in its simplest form.

*Answer(b)* ..... : ..... [2]

(c) Kate invests \$120 for 5 years at 4% per year simple interest.

Calculate the total amount Kate has after 5 years.

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

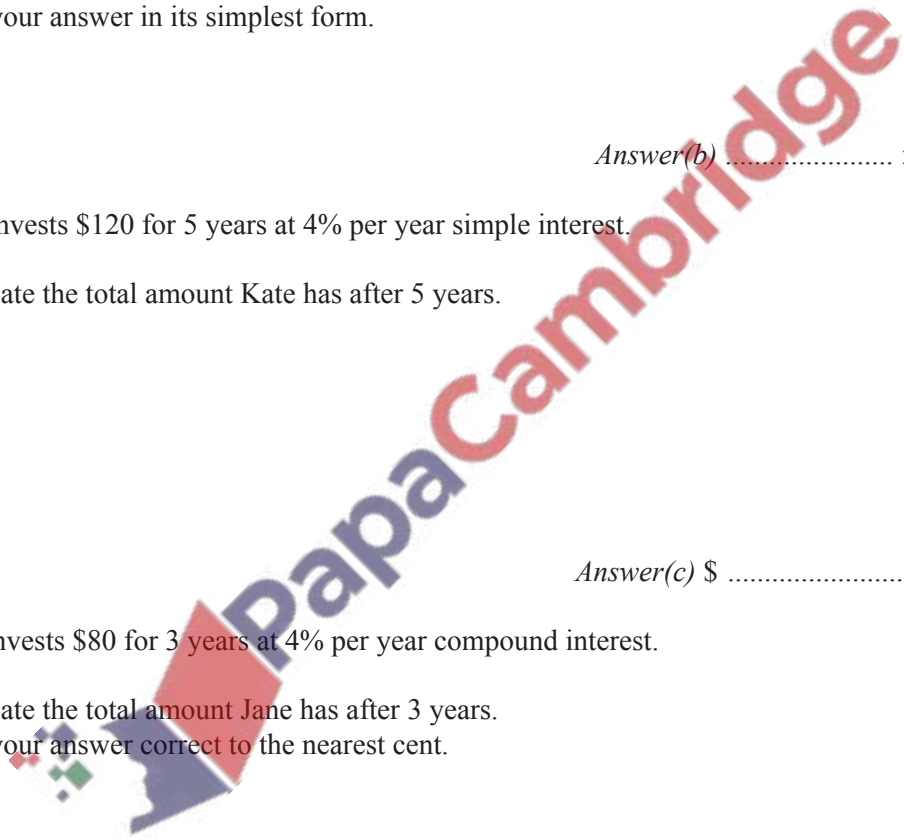
(d) Jane invests \$80 for 3 years at 4% per year compound interest.

Calculate the total amount Jane has after 3 years.  
Give your answer correct to the nearest cent.

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

(e) An investment of \$200 for 2 years at 4% per year compound interest is the same as an investment of \$200 for 2 years at  $r\%$  per year simple interest.

Find the value of  $r$ .



- 3 Emily invests \$ $x$  at a rate of 3% per year simple interest.  
After 5 years she has \$20.10 interest.

Find the value of  $x$ .

Answer  $x =$  ..... [3]

- 4 Pam wins the student of the year award in New Zealand.  
She sends three photographs of the award ceremony by post to her relatives.

- one of size 13 cm by 23 cm to her uncle in Australia
- one of size 15 cm by 23 cm to her sister in China
- one of size 23 cm by 35 cm to her mother in the UK

Maximum lengths	Australia	Rest of the world
13 cm by 23.5 cm	\$1.90	\$2.50
15.5 cm by 23.5 cm	\$2.40	\$2.90
23 cm by 32.5 cm	\$2.80	\$3.40
26 cm by 38.5 cm	\$3.60	\$5.20

The cost of postage is shown in the table above.  
Use this information to calculate the total cost.

Answer \$ ..... [3]

5 David sells fruit at the market.

(a) In one week, David sells 120kg of tomatoes and 80kg of grapes.

(i) Write 80kg as a fraction of the total mass of tomatoes and grapes.  
Give your answer in its lowest terms.

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

(ii) Write down the ratio mass of tomatoes : mass of grapes.  
Give your answer in its simplest form.

Answer(a)(ii) ..... [1]

(b) (i) One day he sells 28 kg of oranges at \$1.56 per kilogram.  
He also sells 35 kg of apples.  
The total he receives from selling the oranges and the apples is \$86.38 .

Calculate the price of 1 kilogram of apples.

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

(ii) The price of 1 kilogram of oranges is \$1.56 .  
This is 20% more than the price two weeks ago.

Calculate the price two weeks ago.

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

(c) On another day, David received a total of \$667 from all the fruit he sold.  
The cost of the fruit was \$314.20 .  
David worked for  $10\frac{1}{2}$  hours on this day.

Calculate David's rate of profit in dollars per hour.