

PERCENTAGES (HIGHER)

[ESTIMATED TIME: 75 minutes]

GCSE

(+ IGCSE) EXAM QUESTION PRACTICE

1.

[5 marks]

In January 2007 the population of Canada was 32 million.
7 million of these Canadian people spoke French as their first language.

- (a) Express 7 million as a percentage of 32 million.
Give your answer correct to 1 decimal place.

..... %
(2)

Between January 2007 and January 2009 the population of Canada increased by 4%.

- (b) Increase 32 million by 4%.
Give your answer correct to the nearest million.

..... million
(3)

2.

[5 marks]

- (a) Cheng invested 3500 dollars.
At the end of one year, interest of 161 dollars was added to his account.

Express 161 as a percentage of 3500

..... %
(2)

- (b) Lian invested an amount of money at an interest rate of 5.2% per year.
After one year, she received interest of 338 dollars.

Work out the amount of money Lian invested.

..... dollars
(3)

3.

[4 marks]

Brett's weekly pay is \$760
He spends \$266 on rent.

- (a) Express \$266 as a percentage of \$760

..... %
(2)

Kazia spends \$204 a week on rent.
\$204 is 30% of her weekly pay.

- (b) Work out her weekly pay.

\$
(2)

- (a) Dilip buys a painting for \$ 675
Later, he sells it and makes a percentage profit of 12%.
Work out the price for which Dilip sells the painting.

\$
(3)

- (b) Renuka sells her car.
She makes a loss of \$ 2162
Her percentage loss is 23%.
Work out the price for which Renuka sells her car.

\$
(3)

- (c) Lin bought a computer that had a value of \$ 1500
At the end of each year, the value of her computer had depreciated by 40% of its value at the start of that year.
Calculate the value of her computer at the end of 3 years.

\$
(3)

A clothes shop has a sale.

In the sale, normal prices are reduced by 12%

The normal price of a shirt is £30

(a) Work out the sale price of the shirt.

£.....
(3)

The price of a coat is reduced by £9 in the sale.

(b) Work out the normal price of the coat.

£.....
(3)

Ying eats some yoghurt.

The yoghurt contains 192 mg of calcium.

This is 16% of the total amount of calcium that Ying should have each day.

Work out the total amount of calcium that Ying should have each day.



..... mg

Pat drops a ball onto a wooden floor.

The ball bounces to a height which is 26% less than the height from which it is dropped.

- (a) Pat drops the ball from a height of 85 cm.
Calculate the height to which it first bounces.

..... cm
(3)

- (b) Pat drops the ball from a different height.
It first bounces to a height of 48.1 cm.
Calculate the height from which he dropped it.

..... cm
(3)

The price of 1 kg of silver on 1st January 2010 was \$607
By 1st January 2015, the price of 1 kg of silver had decreased by 9.4%

- (a) Work out the price of 1 kg of silver on 1st January 2015.
Give your answer correct to the nearest dollar (\$).

\$.....
(3)

Between 1st January 2010 and 1st January 2015, the price of 1 tonne of copper decreased
by 20%

This was a decrease of \$1320

- (b) Work out the price of 1 tonne of copper on 1st January 2010.

\$.....
(3)

A mobile phone company makes a special offer.
Usually one minute of call time costs 5 cents.
For the special offer, this call time is increased by 20%.

- (a) Calculate the call time which costs 5 cents during the special offer.
Give your answer in seconds.

..... seconds
(2)

- (b) Calculate the cost per minute for the special offer.

..... cents
(2)

- (c) Calculate the percentage decrease in the cost per minute for the special offer.

.....%
(3)

Liam invests £8000 in a savings account for 4 years.
The savings account pays compound interest at a rate of

4.5 % for the first year

2.75 % for all subsequent years.

(a) Work out the value of Liam's investment at the end of 4 years.

£.....
(3)

Max invests some money in a savings bond.
The savings bond pays interest at a rate of 2% per year.

At the end of the first year, his savings bond is worth £5763

(b) How much money did Max invest in the savings bond?

£.....
(3)

George, Matthew and Isabelle invest money in a savings account, which pays compound interest of 3% p.a.

- (a) George invested £4800.
Work out the total value of his investment after 5 years.

.....
(3)

- (b) Matthew invested £3400.
Work out the amount of interest that he earned after 4 years.

.....
(3)

- (c) Isabelle had earned £320 interest after 6 years.
Work out the amount of money that Isabelle invested.

.....
(3)

12.

[3 marks]

Jothi bought a car.
Later, Jothi sold the car for £2125
He made a loss of 15%.
Work out the original price of the car.

£

13.

[3 marks]

Naoby invests £6000 for 5 years.
The investment gets compound interest of $x\%$ per annum.
At the end of 5 years the investment is worth £8029.35
Work out the value of x .

.....

Katy invests £2000 in a savings account for 3 years.

The account pays compound interest at an annual rate of

2.5% for the first year

$x\%$ for the second year

$x\%$ for the third year

There is a total amount of £2124.46 in the savings account at the end of 3 years.

(a) Work out the rate of interest in the second year.

.....
(4)

Katy goes to work by train.

The cost of her weekly train ticket increases by 12.5% to £225

(b) Work out the cost of her weekly train ticket before this increase.

£.....
(2)