Name: SOLUTIONS

GCSE (1 - 9)

Percentage Change

Buy me a coffee

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These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk

Question	Where the question appeared
1	Edexcel, GCSE, Autumn 2021, Paper 1F, Q19
2	Edexcel, GCSE, Autumn 2020, Paper 1F, Q24 Edexcel, GCSE, Autumn 2020, Paper 1H, Q5
3	Edexcel, GCSE, Autumn 2019, Paper 3F, Q21
4	Edexcel, GCSE, Autumn 2018, Paper 3F, Q21 Edexcel, GCSE, Autumn 2018, Paper 3H, Q2
5	Edexcel, GCSE, Autumn 2017, Paper 2F, Q17 Edexcel, GCSE, Autumn 2017, Paper 2H, Q2
6	Edexcel, GCSE, Summer 2019, Paper 3H, Q10
7	Edexcel, GCSE, Autumn 2018, Paper 1H, Q11
8	Edexcel, GCSE, Autumn 2018, Paper 2H, Q10
9	Edexcel, GCSE, Autumn 2018, Paper 1H, Q3

Percentage Change (Questions from Past Papers)

1

Robin buys a watch for £80
He sells the watch for £56

Work out his percentage loss.

Loss = 80 − 56 = 24

$100 \times \frac{24}{80} = 100 \times 0.3 = 30\%$

30 %

(Total for Question 19 is 3 marks)

[Edexcel, GCSE, Autumn 2021, Paper 1F, Q19]

2

Sean pays £10 for 24 chocolate bars.

He sells all 24 chocolate bars for 50p each.

Work out Sean's percentage profit.

24 × 50p = £12

Profit = £12 − £10 = £2

$\frac{2}{10} \times 100 = 0.2 \times 100$

= 20 %

(Total for Question 24 is 3 marks)

[Edexcel, GCSE, Autumn 2020, Paper 1F, Q24
Edexcel, GCSE, Autumn 2020, Paper 1H, Q5]

3

Franco buys a house for £146 500
He sells the house for £158 220

Calculate the percentage profit Franco makes.

Profit = 158 220 − 146 500 = 11 720

$\frac{11\,720}{146\,500} \times 100 = 8\%$

..... %

(Total for Question 21 is 3 marks)

[Edexcel, GCSE, Autumn 2019, Paper 3F, Q21]

4

Last year Jo paid £245 for her car insurance.
This year she has to pay £883 for her car insurance.

Work out the percentage increase in the cost of her car insurance.

Increase = 883 − 245 = 638

$\frac{638}{245} \times 100 = 260.408$

260.4 %

(Total for Question 21 is 3 marks)

[Edexcel, GCSE, Autumn 2018, Paper 3F, Q21
Edexcel, GCSE, Autumn 2018, Paper 3H, Q2]

5

Emily buys a pack of 12 bottles of water.
The pack costs £5.64

Emily sells all 12 bottles for 50p each.

Work out Emily's percentage profit.
Give your answer correct to 1 decimal place.

12 x 50p = £6

6 - 5.64 = £0.36 profit

$\frac{0.36}{5.64} \times 100 = 6.38$

6.4%

..... %

(Total for Question 17 is 3 marks)

[Edexcel, GCSE, Autumn 2017, Paper 2F, Q17
Edexcel, GCSE, Autumn 2017, Paper 2H, Q2]

6

Marie invests £8000 in an account for one year.
At the end of the year, interest is added to her account.

Marie pays tax on this interest at a rate of 20%
She pays £28.80 tax.

Work out the percentage interest rate for the account.

20% = 28.80 (x5)

100% = 144 (x5)

$\frac{144}{8000} \times 100 = 1.8$

1.8

..... %

(Total for Question 10 is 3 marks)

[Edexcel, GCSE, Summer 2019, Paper 3H, Q10]

7

Jack and Sadia work for a company that sells boxes of breakfast cereal.

The company wants to have a special offer.

Here is Jack's idea for the special offer.

> Put 25% more cereal into each box and do **not** change the price.

Here is Sadia's idea.

> Reduce the price and do **not** change the amount of cereal in each box.

Sadia wants her idea to give the same value for money as Jack's idea.

By what percentage does she need to reduce the price?

eg

400g = £4

+25%

500g = £4

÷5 (100g = 80p) ÷5

eg

400g = £4

−20%

400g = £3·20

÷4 (100g = 80p) ÷4

20 %

(Total for Question 11 is 3 marks)

[Edexcel, GCSE, Autumn 2018, Paper 1H, Q11]

8

Robert makes 50 litres of green paint by mixing litres of yellow paint and litres of blue paint in the ratio 2 : 3

Yellow paint is sold in 5 litre tins.
Each tin of yellow paint costs £26

Blue paint is sold in 10 litre tins.
Each tin of blue paint costs £48

Robert sells all the green paint he makes in 10 litre tins.
He sells each tin of green paint for £66.96

Work out Robert's percentage profit on each tin of green paint he sells.

50 Litres green paint

Yellow : Blue
2 : 3
x10 ↓ ↓ x10
20 litres : 30 Litres

Cost of yellow paint

5 litres = £26
20 litres = £104

Cost of blue paint

10 litres = £48
x3 ↓ ↓ x3
30 Litres = £144

Total Cost
104 + 144
= £248

x5 ↓ ↓ x5
10 litres = 66.96
50 litres = £334.80

334.80 - 248 = 86.80 profit

$\frac{86.80}{248} \times 100 = 35$ %

(Total for Question 10 is 5 marks)

[Edexcel, GCSE, Autumn 2018, Paper 2H, Q10]

9

Renee buys 5 kg of sweets to sell.
She pays £10 for the sweets.

Renee puts all the sweets into bags.
She puts 250 g of sweets into each bag.
She sells each bag of sweets for 65p.

Renee sells all the bags of sweets.

Work out her percentage profit.

5kg = 5000g

$\frac{5000}{250}$ = 20 bags

20 x 65p = £13

Profit = 13 − 10 = 3

$\frac{3}{10}$ x 100 = 30%

..... %

(Total for Question 3 is 4 marks)

[Edexcel, GCSE, Autumn 2018, Paper 1H, Q3]