



---

## National 5 Maths Percentages

SQA past paper and specimen paper  
questions and answers by topic

---

SQA material is copyright © Scottish Qualifications Authority  
and has been reproduced by kind permission of SQA.

This resource is free to distribute and use on a non-commercial basis.

Visit [Maths.scot](https://www.maths.scot) for full worked solutions to each of these questions.



Beth normally cycles a total distance of 56 miles per week.  
She increases her distance by 15% each week for the next three weeks.  
How many miles will she cycle in the third week?

**3**

---

Answer:

85.169 miles

---

This year Adèle paid £465 for her car insurance.  
This is an increase of 20% on last year's payment.  
How much did Adèle pay last year?

**3**

---

Answer:

£387.50

**National 5 Maths**  
**SQA 2014 Paper 1**  
**Question 9**

---

480 000 tickets were sold for a tennis tournament last year.

This represents 80% of all the available tickets.

Calculate the total number of tickets that were available for this tournament.    **3**

---

Answer:

600 000

**National 5 Maths**  
**SQA 2014 Paper 2**  
**Question 1**

National 5 Maths

**Maths.scot**



---

There are 964 pupils on the roll of Aberleven High School.

It is forecast that the roll will decrease by 15% per year.

What will be the expected roll after 3 years?

Give your answer to the nearest ten.

**3**

---

Answer:

590

**National 5 Maths**  
**SQA 2015 Paper 2**  
**Question 1**

A house is valued at £240 000.

Its value is predicted to rise by 2.8% per annum.

Calculate its predicted value after 2 years.

**3**

---

Answer:

£253 628

**National 5 Maths**  
**SQA 2015 Paper 2**  
**Question 8**

James paid £297.50 for a laptop in a sale.  
The discount in the sale was 15%.  
Calculate the original price of the laptop.

**3**

---

Answer:

£350

**National 5 Maths**  
**SQA 2016 Paper 2**  
**Question 1**

A drinks manufacturer is reducing the sugar content of one of their fizzy drinks by 8% per year over the next 3 years.

The sugar content of a standard can is currently 35 grams.

Calculate the sugar content of a standard can after 3 years.

**3**

---

Answer:

27.3 g (approximately)

Beth normally cycles a total distance of 64 miles per week.

She increases her total distance by 15% each week for the next three weeks.

How many miles does she cycle in the third week?

**3**

Give your answer to the nearest mile.

---

Answer:

97 miles

**National 5 Maths**  
**SQA 2017 Paper 2**  
**Question 2**

A necklace is valued at £1200.

Its value is expected to increase by 4.5% per year over the next 3 years.

Calculate the expected value of the necklace after this time.

Give your answer to the nearest pound.

**3**

---

Answer:

£1369

**National 5 Maths**  
**SQA 2017 Paper 2**  
**Question 5**

A theatre group sold 4830 tickets for their show.  
This was 15% more than they sold last year.  
How many tickets did they sell last year?

**3**

---

Answer:

4200

**National 5 Maths**  
**SQA 2018 Paper 2**  
**Question 1**

National 5 Maths

**Maths.scot**



---

Households in a city produced a total of 125 000 tonnes of waste in 2017.

The total amount of waste is expected to fall by 2% each year.

Calculate the total amount of waste these households are expected to produce in 2020.

**3**

---

Answer:

117 649 tonnes

Venus and Earth are two planets within our solar system.



Venus



Earth

The volume of Venus is approximately  $9.3 \times 10^{11}$  cubic kilometres.

This is 85% of the volume of Earth.

Calculate the volume of Earth.

3

---

Answer:

$$1.094 \times 10^{12} \text{ km}^3$$

**National 5 Maths**  
**SQA 2019 Paper 2**  
**Question 1**

National 5 Maths

**Maths.scot**



---

A charity distributed 80 000 emergency packages during 2018.

This number is expected to increase by 15% each year.

Calculate how many emergency packages the charity expects to distribute in 2021.

**3**

---

Answer:

121 670

**National 5 Maths**  
**SQA 2019 Paper 2**  
**Question 9**

Georgie had her roof repaired.

She was charged an extra 2.5% for late payment.

She had to pay a total of £977.85.

Calculate how much she would have **saved** if she had paid on time.

**3**

---

Answer:

£23.85

**National 5 Maths**  
**SQA 2021 Paper 1**  
**Question 12**

A band sold 2400 tickets for their gig in Edinburgh.

This was 75% of the number of tickets sold for their gig in Glasgow.

Calculate the number of tickets sold for their gig in Glasgow.

**3**

---

Answer:

3200

**National 5 Maths**  
**SQA 2021 Paper 2**  
**Question 1**

A housing development is being built.

The price of a house built in 2020 is £250 000.

This price is expected to increase by 4% each year.

Calculate the expected price of a house built in 2022.

**3**

---

Answer:

£270 400

**National 5 Maths**  
**SQA 2022 Paper 1**  
**Question 10**

Tommy buys flower seeds from a website.

Tommy is given a 30% discount. He pays £16.10 for the seeds.

Calculate the cost of the flower seeds without the discount.

**3**

---

Answer:

£23

**National 5 Maths**  
**SQA 2022 Paper 2**  
**Question 2**

National 5 Maths

**Maths.scot**



---

A company's annual profit at the end of 2021 was £215,000.

The profit is expected to increase by 3% each year.

Calculate the company's expected annual profit by the end of 2025.

Give your answer correct to the nearest thousand pounds.

**3**

---

Answer:

£242 000

**National 5 Maths**  
**SQA 2023 Paper 2**  
**Question 1**

A caravan was bought for £20,000.

It depreciated by 11% in the first year.

It then depreciated by a further 6% each year over the next two years.

Calculate the value of the caravan three years after it was bought.

**3**

---

Answer:

£15 728.08

**National 5 Maths**  
**SQA 2023 Paper 2**  
**Question 6**

Nadim bought a flat last year.

The value of the flat has increased by 8% and it is now worth £94,500.

Calculate how much Nadim paid for the flat.

**3**

---

Answer:

£87 500

**National 5 Maths**  
**SQA 2024 Paper 2**  
**Question 1**

---

Dougie pays £460 for a new laptop.

It is expected that the value of the laptop will depreciate by 26% each year.

Calculate the expected value of Dougie's laptop after 3 years.

**3**

---

Answer:

£186.40

**National 5 Maths**  
**SQA 2024 Paper 2**  
**Question 5**

---

This year the cost of Charley's car insurance is £278.40.

This is an increase of 16% on last year's cost.

Calculate the cost of Charley's insurance last year.

**3**

---

Answer:

£240

**National 5 Maths**  
**SQA 2025 Paper 1**  
**Question 4**

---

In a sale, the price of a wedding dress is reduced by 20%.

The sale price of the dress is £720.

Calculate the price of the dress before the sale.

**3**

---

Answer:

£900

**National 5 Maths**  
**SQA 2025 Paper 2**  
**Question 1**

The number of visitors to a zoo in 2024 was 118 750.

The number of visitors is expected to increase by 4% each year over the next two years.

Calculate the expected number of visitors in 2026.

**3**

---

Answer:

128440