

## SQA Past paper questions

### 2024 - Paper 2 - Question 1

A school currently has 1200 pupils.

The number of pupils is expected to increase by 5.3% each year for the next 4 years.

Calculate the expected number of pupils after 4 years.

Give your answer rounded to **3 significant figures**.

4



Click [here](#) for video solution. 

### 2023 - Paper 2 - Question 1

A lake had a volume of 14 730 000 litres.

Due to decreasing rainfall the volume of the lake is expected to decrease by 2.8% annually.

Calculate the expected volume of the lake after 3 years.

Give your answer to **3 significant figures**.

4



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### 2022 - Paper 2 - Question 1

A soft drinks company currently have sales of 240 000 bottles per year.

It is predicted that sales will

- Decrease by 4.2% in the next year.
- Increase by 5.3% in each of the following 2 years.

Calculate the predicted sales after 3 years.

Give your answer to **3 significant figures**.



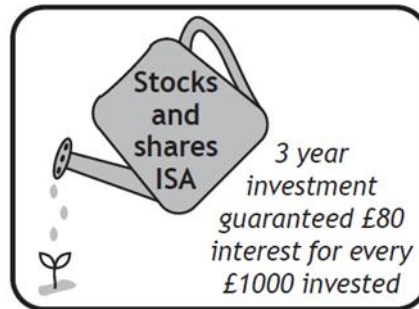
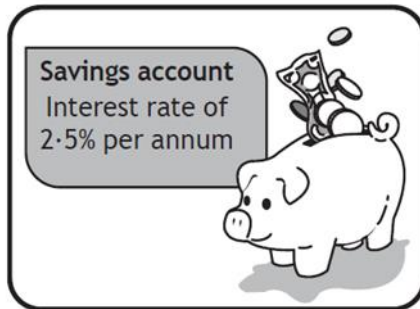
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**2021 - Paper 2 - Question 1**

Omar has £3000 which he will invest for 3 years.

He is considering two options.



Determine which option will have the greater value after 3 years.

Use your working to justify your answer.

4

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**2019 - Paper 2 - Question 1**

Sam buys a rare stamp for his stamp collection at an auction. He buys the stamp for £920.

The stamp

- increased in value by 7% in each of the first 2 years
- decreased in value by 4% in the third year.



Calculate the value of the stamp after these 3 years.

Give your answer to 3 significant figures.

4

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**2018 - Paper 2 - Question 1**

Jack bought a car 3 years ago costing £1400.

The car has decreased in value by 13% each year.



- (a) Calculate the current value of the car.

Give your answer to 2 significant figures.

4

Jack sells his car for £950.

- (b) Calculate his loss as a percentage of the original price.

2

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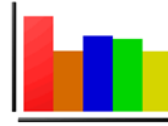
### 2017 - Paper 2 - Question 2(a)

Asif bought 8000 shares in a local company in April 2013.

Each share cost him 73 pence.

The value of the shares

- decreased by 3% in the first year then,
- increased by 4·2% in each of the next two years.



How much were Asif's shares worth in total in April 2016? 5

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### 2016 - Paper 2 - Question 1

The population of Scotland is recorded to the nearest hundred.

In 2014, the population was 5 347 600.

In 2015, the population was 5 369 000.

- (a) Show that the percentage growth in population from 2014 to 2015 was 0·4%.



2

- (b) If the population continues to grow at the same rate, calculate the expected population in 2018.

Give your answer to the nearest hundred.

3

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## Additional National 5 Maths questions...

### 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

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**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**

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**2022 - Paper 2 - Question 2**

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.

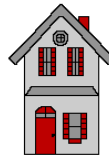
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**2021 - Paper 2 - Question 1**

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**

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**2019 - Paper 2 - Question 1**

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**

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**2018 - Paper 2 - Question 1**

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**

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**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**

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**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**

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**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**

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## 2014 - Paper 2 - Question 1

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

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## Specimen - Paper 2 - Question 1

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

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## 2012 - Paper 2 - Question 1

There are 2.69 million vehicles in Scotland.  
It is estimated that this number will increase at a rate of 4% each year.  
If this estimate is correct, how many vehicles will there be in 3 years' time?  
Give your answer **correct to 3 significant figures**.

4

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## 2011 - Paper 2 - Question 1

Olga normally runs a total distance of 28 miles per week.  
She decides to increase her distance by 10% a week for the next four weeks.  
How many miles will she run in the fourth week?



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## 2010 - Paper 2 - Question 1

It is estimated that an iceberg weighs 84 000 tonnes.

As the iceberg moves into warmer water, its weight decreases by 25% each day.

What will the iceberg weigh after 3 days in the warmer water?

Give your answer **correct to three significant figures**.



4

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## 2009 - Paper 2 - Question 8

A company makes large bags of crisps which contain 90 grams of fat.

The company aims to reduce the fat content of the crisps by 50%.

They decide to reduce the fat content by 20% each year.

Will they have achieved their aim by the end of the 3rd year?

**Justify your answer.**



4

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## 2008 - Paper 2 - Question 1

A local council recycles 42 000 tonnes of waste a year.

The council aims to increase the amount of waste recycled by 8% each year.

How much waste does it expect to recycle in 3 years time?

Give your answer **to three significant figures**.



4

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## 2007 - Paper 2 - Question 1

Alistair buys an antique chair for £600.

It is expected to increase in value at the rate of 4.5% each year.

How much is it expected to be worth in 3 years?



3

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