

# Standard Form Exam Questions

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Question 1.

Work out  $4 \times 10^7 \times 6 \times 10^{-5}$ . Give your answer in standard form.

[2]

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Question 2.

Work out  $\frac{3.2 \times 10^8}{4 \times 10^4}$ . Give your answer in standard form.

[2]

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Question 3.

Work out  $(4 \times 10^5)^2$ . Give your answer in standard form.

[2]

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Question 4.

$$p = 8 \times 10^3$$
$$q = 2 \times 10^4$$

Calculate the value of the following, giving your answers in standard form.

(a)  $pq$

[2]

(b)  $p + q$

[2]

(c)  $p \div q$

[2]

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Question 5.

Last year the population of the UK was approximately  $5.3 \times 10^7$ .

An average of £680 per person was spent on food last year in the UK.

What was the total amount spent on food last year in the UK? Give your answer in standard form.

[3]

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Question 6.

A publisher prints  $1.25 \times 10^6$  copies of a magazine. Each magazine consists of 18 sheets of paper.

- (a) Calculate the number of sheets of paper needed to print all the magazines.

Give your answer in standard form.

[2]

To make the magazine, the sheets of paper are folded as shown



- (b) The height of a pile of magazines is 79.1 cm. The pile contains 232 magazines.

Calculate, in centimetres, the thickness of one sheet of paper.

[3]

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Question 7.

A rectangular picture measures  $1.2 \times 10^2$  cm by  $4.3 \times 10^3$  cm.

Calculate the following, giving your answer in standard form. Remember to state the units with your answers.

- (a) The perimeter of the picture

[2]

- (b) The area of the picture

[3]

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Question 8.

It is estimated that a water tank contains about  $1.12 \times 10^7$  drops of rain water.

By taking samples, it is further estimated that the water contains about  $5.80 \times 10^9$  microbes.

Assuming an even distribution, give an estimate of the number of microbes per drop of rain water.

Give your answer in standard form, correct to 3 significant figures.

[4]

Standard form – used to write very large and very small numbers in an easier way.

You can use your calculator to enter standard form numbers using the EXP button.

$5.3 \times 10^6$  would be entered as 5.3 EXP 6. Remember to use brackets when doing calculations!