



Aberdare Community School
Mathematics Department

WJEC GCSE
Higher – Non Calculator
Number

Standard form

Name:

Set:

Date:

Teacher:

15. (a) Write 0.0056 in standard form.

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[1]

(b) Find, in standard form, the value of $(3 \times 10^5) \times (4 \times 10^{-3})$.

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.....
[2]

11.

(c) Write each of the following numbers in standard form.

(i) 45 000

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(ii) 0.0023

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[2]

(d) In a test Jayne was asked to write the answer to 20 multiplied by 490 in standard form. She wrote 9800 as her answer. Explain carefully why this was marked incorrect and give the expected answer.

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[2]

(e) Find, in standard form, the value of $\frac{4.6 \times 10^{-6}}{2 \times 10^{-4}}$

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[2]

9. (a) Write **each** of the following numbers in standard form.

(i) 0.0047

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(ii) 32000

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[2]

(b) Find, in standard form, the value of

$$(2.1 \times 10^{-5}) \times (3 \times 10^8).$$

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[2]

16. (a) Write **each** of the following numbers in standard form.

(i) 3500

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(ii) 0.3

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[2]

(b) Arrange the following in ascending order.

3×10^4

3×10^{-4}

$10^2 \times 10^5$

10^0

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Smallest

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Largest

[2]

10.

(c) Write **each** of the following numbers in standard form.

(i) 35 000 000

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(ii) 0.000013

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[2]

(d) Find, in standard form, the value of $\frac{4.8 \times 10^{16}}{1.2 \times 10^4}$.

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[2]

9.

(b) Evaluate the following. Express your answer in standard form.

$$\frac{2^8 \times 5^2}{2^2}$$

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[3]

9.

(b) Write 0.000093 in standard form.

..... [1]

(c) Evaluate $\frac{8.8 \times 10^4}{2.2 \times 10^{-3}}$ giving your answer in standard form.

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..... [2]

9. (a) Write each of the following numbers in standard form.

(i) 5800

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(ii) 0.004

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[2]

(b) Find, in standard form, the value of $\frac{5.6 \times 10^6}{2 \times 10^{-3}}$.

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[2]

(c) Find the value of $(8 \times 10^3) - (2 \times 10^3)$.

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[1]





10. The distance of the Moon from the Earth varies between 3.56×10^5 km and 4.06×10^5 km. Find the difference between these two distances. Give your answer in standard form.

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[2]

9. A company owns a number of buses.

Bus	Unladen weight in kg
 Single decker low floor bus	7.72×10^3
 Minibus	4.68×10^3

Calculate the **total** unladen weight of **two** single decker low floor buses and **one** minibus altogether.

Give your answer in standard form.

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[3]

10. (a) Express 2 380 000 in standard form correct to two significant figures.

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[2]

8. (a) In 2004 there were 7 000 000 people living alone in Great Britain, this is four times as many as in 1961.
Calculate how many people lived alone in Great Britain in 1961.
Express your answer in standard form.

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[3]



9.

(iv) $3.4 \times 10^3 + 1.2 \times 10^2$

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[2]



1 4

[6]

8. (a) Express 0.000053 in standard form.

..... [1]

- (b) Evaluate $(4.5 \times 10^7) \times (4 \times 10^5)$ giving your answer in standard form.

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[2]

1.

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(d) Evaluate $(0.78 \times 10 + 3.2)^2$.

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[2]

4363
02/00/03

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[2]

9. A sheet of card is 0.09 mm thick.
Find the thickness of the card **in metres**, expressing your answer in standard form.
You must show all your working.

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[3]



6. Express each of the following numbers in standard form.

(a) 0.00083

..... [1]

(b) 460000

..... [1]

10.

(c) Write 0.00085 in standard form.

..... [1]

(d) Evaluate $\frac{3.9 \times 10^7}{1.3 \times 10^{-2}}$, giving your answer in standard form.

..... [2]

8. (a) Arrange the following numbers in ascending order.

2100

 2.4×10^{-3} 2.4×10^3 10^3

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Smallest Largest

[2]

(b) Evaluate $6 \times 10^{13} + 9 \times 10^{13}$, giving your answer in standard form.

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[2]



14. Evaluate the following, giving your answer in standard form.

(a) $\frac{6.3 \times 10^{12}}{12.6 \times 10^8}$

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[2]

(b) $(8 \times 10^2) \times (3 \times 10^6)$

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[2]

(c) $(3.24 \times 10^8) + (1.2 \times 10^7)$

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[2]

10. The mass of the planet Jupiter is 1.9×10^{27} kg.

The mass of the planet Venus is 4.87×10^{24} kg.

Approximately how many times bigger is the mass of Jupiter than the mass of Venus? [3]

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13.

(c) Evaluate $\frac{4.5 \times 10^8}{9 \times 10^{12}}$, giving your answer in standard form.

[2]

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11. Evaluate the following, giving each of your answers in standard form.

(a) $(2.5 \times 10^6) \times (8 \times 10^3)$

[2]

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(b) $5 \times 10^8 + 6.8 \times 10^9$

[2]

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10. Gethin's blood contains 5.97×10^6 red blood cells per millilitre.
He has 4.02 litres of blood in his body.

Estimate the total number of red blood cells Gethin has in his blood.
Give your answer in standard form.

[3]

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