GCSE - Numeracy and Mathematics Topic: Standard Index Form	Tier: Intermediate	Grade: B

Starter

Calculate:

1) 7.4 x 100 =
2) 675 ÷ 10 =
3) 6.8 x 1000 =
4) 0.62 ÷ 100 =

Top Tips!

In standard form a number is always written as $a \times 10^n$ where a ≤ 10 and n is an integer. Remember:

- Multiply a with 10 'n' number of times (if n is positive)
- Divide a with 10 'n' number of times (if n is negative)

Learn to use standard form on your calculator 

Skills:

Fill the gaps in the table below:

Regular number	Standard Form
7 000 000	
	2×10^{10}
82 300 000	
	7.601×10^{5}
0.000006	
	7×10^{-3}
0.0000372	

Examination Question:

2014 JuneLink - Applications U2 Higher Qu 10

During an experiment, a scientist notices that the number of bacteria halves every second. There were 2.3×10^{30} bacteria at the start of the experiment. Calculate how many bacteria were left after 5 seconds. Give your answer in standard form correct to two significant figures. [4]

Assessment for Learning

Video / QR code

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Calculate:

1) 7.4 x 100 = 740
2) 675 ÷ 10 = 67.5
3) 6.8 x 1000 = 6800
4) 0.62 ÷ 100 = 0.0062

Top Tips!

In standard form a number is always written as $a \times 10^n$ where a ≤ 10 and n is an integer. Remember:

- Multiply a with 10 'n' number of times (if n is positive)
- Divide a with 10 'n' number of times (if n is negative)

Learn to use standard form on your calculator 

Skills:

Fill the gaps in the table below:

Regular number	Standard Form
7 000 000	7×10^6
20000000000	2×10^{10}
82 300 000	8.23×10^7
760100	7.601×10^5
0.000006	6×10^{-6}
0.007	7×10^{-3}
0.0000372	3.72×10^{-5}

Examination Question:

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During an experiment, a scientist notices that the number of bacteria halves every second. There were 2.3×10^{30} bacteria at the start of the experiment. Calculate how many bacteria were left after 5 seconds. Give your answer in standard form correct to two significant figures. [4]

2.3×10^{30}

1.15×10^{30}

0.575×10^{30}

0.2875×10^{30}

0.14375×10^{30}

$\mathbf{1.4 \times 10^{29}}$

Assessment for Learning

Video / QR code


GwE