Standard form: small numbers

ANSWERS

1

Write **0.0054** in standard form.

$0.0054 =$ [0.054] $\div 10^{1}$

$0.0054 =$ [0.54] $\div 10^{2}$

$0.0054 =$ [5.4] $\div 10^{3}$

Multiply by 10, divide by one more 10.
$\div 10^{3}$ is the same as $\times 10^{-3}$

0.0054 = [5.4] **× 10** [−3]

2

Write **0.00038** in standard form.

$0.00038 =$ [0.0038] $\div 10^{1}$

$0.00038 =$ [0.038] $\div 10^{2}$

$0.00038 =$ [0.38] $\div 10^{3}$

$0.00038 =$ [3.8] $\div 10^{4}$

0.00038 = [3.8] **× 10** [−4]

3

Write **0.067** in standard form.

$0.067 =$ [0.67] $\div 10^{1}$

$0.067 =$ [6.7] $\div 10^{2}$

0.067 = [6.7] **× 10** [−2]

4

Write **0.000029** in standard form.

0.000029 = [2.9] **× 10** [−5]

5

Write **0.0703** in standard form.

0.0703 = [7.03] **× 10** [−2]

6

Write **3.9×10^{-4}** as an ordinary number.

$\times 10^{-4}$ means $\div 10^{4}$

3.9 ÷ 10 four times

Answer 0.00039

7

A thread of spider silk is about 0.000004 m thick. Write this in standard form.

0.000004 = 4 ÷ 10^{6}

4 ÷ 1 000 000

Answer 4×10^{-6} m

8

Priya writes 0.0083 as 8.3×10^{-2}.
What has she done wrong?
Write it correctly.

she counted the 2 zeros

0.0083 × 10 three times = 8.3

Answer 8.3×10^{-3}

Standard form: small numbers *further practice*

ANSWERS

9

A sheet of kitchen foil is about 1.6×10^{-5} m thick. Write this as an ordinary number.

1.6 ÷ 10 five times

Answer *0.000016 m*

10

Find the missing power.

$0.00071 = 7.1 \times 10^{\boxed{-4}}$

0.00071 × 10 four times = 7.1

11

The masses of four seeds are shown, in grams. Write the masses in order, lightest first.

3.2×10^{-3} 5×10^{-4} 1.9×10^{-2} 2.8×10^{-3}

1st *5×10^{-4}* 2nd *2.8×10^{-3}*

3rd *3.2×10^{-3}* 4th *1.9×10^{-2}*

12

Circle the numbers that are less than 1.

3.6×10^{2} (*8×10^{-1}*) (*1.2×10^{-4}*) 5.5×10^{3} (*9.9×10^{-2}*)

a negative power means less than 1

÷ 10 at least once

13

A virus is about 1.2×10^{-7} m wide.
A bacterium is about 2×10^{-6} m long.
Which is smaller? Show how you know.

0.00000012 m and 0.000002 m

−7 is a more negative power

Answer *the virus*

14

Complete the table.

Ordinary number	Standard form
0.0029	*2.9×10^{-3}*
0.000066	6.6×10^{-5}
0.81	*8.1×10^{-1}*

15

47×10^{-4} is not in standard form.
Write it in standard form.

47 = 4.7 × 10

$4.7 \times 10 \times 10^{-4}$

Answer *4.7×10^{-3}*

16

Tom says 2×10^{-6} is bigger than 2×10^{-3}, because 6 is bigger than 3. Is Tom right? Explain your answer.

0.000002 and 0.002

÷ 10 six times makes it smaller

Answer *No*