

Standard Form: Small Numbers

ANSWERS

1

Write 0.0062 in standard form.

$$0.0062 = 0.062 \div 10^1$$

$$0.0062 = 0.62 \div 10^2$$

$$0.0062 = 6.2 \div 10^3$$

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

$$0.0062 = 6.2 \times 10^{-3}$$

2

Write 0.00045 in standard form.

$$0.00045 = 0.0045 \div 10^1$$

$$0.00045 = 0.045 \div 10^2$$

$$0.00045 = 0.45 \div 10^3$$

$$0.00045 = 4.5 \div 10^4$$

$$0.00045 = 4.5 \times 10^{-4}$$

3

Write 0.073 in standard form.

$$0.073 = 0.73 \div 10^1$$

$$0.073 = 7.3 \div 10^2$$

$$0.073 = 7.3 \times 10^{-2}$$

4

Write 0.000081 in standard form.

$$0.000081 = 8.1 \times 10^{-5}$$

5

Write 0.0409 in standard form.

$$0.0409 = 4.09 \times 10^{-2}$$

6

Write 0.7 in standard form.

$$0.7 = 7 \times 10^{-1}$$

7

A hair is about 0.00007 m wide.
 Write this in standard form.

$$0.00007 = 7 \div 100\,000 = 7 \div 10^5$$

$$\text{Answer } 7 \times 10^{-5} \text{ m}$$

8

Leo writes 0.0058 as 5.8×10^3 . What has he done wrong? Write it correctly.

$$0.0058 < 1, \text{ so the power is negative}$$

$$\text{Answer } 5.8 \times 10^{-3}$$

Standard Form: Small Numbers further practice

ANSWERS

9

Write 2.5×10^{-3} as an ordinary number.

$$2.5 \div 1000$$

$$\text{Answer } 0.0025$$

10

Find the missing power.

$$0.0048 = 4.8 \times 10^{-3}$$

$$0.0048 = 4.8 \div 1000$$

11

A grain of pollen is about 4.5×10^{-5} m wide. Write this as an ordinary number.

$$4.5 \div 100\,000$$

$$\text{Answer } 0.000045 \text{ m}$$

12

Which is smaller, 3×10^{-4} or 3×10^{-5} ? Show how you know.

$$0.0003 \text{ and } 0.00003$$

$$\text{Answer } 3 \times 10^{-5}$$

13

Write these in order, smallest first.

$$6 \times 10^{-3} \quad 5.9 \times 10^{-2}$$

$$0.0061 \quad 6.5 \times 10^{-4}$$

$$1^{\text{st}} \quad 6.5 \times 10^{-4} \quad 2^{\text{nd}} \quad 6 \times 10^{-3}$$

$$3^{\text{rd}} \quad 0.0061 \quad 4^{\text{th}} \quad 5.9 \times 10^{-2}$$

$$0.006, 0.059, 0.0061, 0.00065$$

14

A flea is 0.0015 m long. A dust mite is 2.5×10^{-4} m long. Which is longer, and by how many metres?

$$0.00150 - 0.00025$$

$$\text{Answer } \text{the flea, by } 0.00125 \text{ m}$$

15

A cell is 8×10^{-6} m wide. How many millimetres wide is the cell?

$$0.000008 \text{ m} \times 1000$$

$$\text{Answer } 0.008 \text{ mm}$$

16

Ella says 4×10^{-3} is a negative number because the power has a minus sign. Is Ella right? Explain.

$$4 \times 10^{-3} = 0.004, \text{ more than } 0$$

$$\text{Answer } \text{No, it is } 0.004$$