Standard form: large numbers

ANSWERS

1

Write **27 000** in standard form.

$27\,000 =$ 2700 $\times 10^{1}$

$27\,000 =$ 270 $\times 10^{2}$

$27\,000 =$ 27 $\times 10^{3}$

Divide by 10, multiply by one more 10.

27 000 = 2.7 **× 10** 4

2

Write **530 000** in standard form.

$530\,000 =$ 53 000 $\times 10^{1}$

$530\,000 =$ 5300 $\times 10^{2}$

$530\,000 =$ 530 $\times 10^{3}$

$530\,000 =$ 53 $\times 10^{4}$

530 000 = 5.3 **× 10** 5

3

Write **9100** in standard form.

$9100 =$ 910 $\times 10^{1}$

$9100 =$ 91 $\times 10^{2}$

9100 = 9.1 **× 10** 3

4

Write **4 600 000** in standard form.

4 600 000 = 4.6 **× 10** 6

5

Notice the change!

Write 7.4×10^{4} as an ordinary number.

$7.4 \times 10^{1} =$ 74

$7.4 \times 10^{2} =$ 740

$7.4 \times 10^{3} =$ 7400

$7.4 \times 10^{4} =$ 74 000

6

Write 6.05×10^{5} as an ordinary number.

$6.05 \times 10^{5} =$ 605 000

7

Write these in order, smallest first.

3.9×10^{5} 8.2×10^{4}

1.6×10^{5} 9.7×10^{3}

1st 9.7×10^{3} 2nd 8.2×10^{4}

3rd 1.6×10^{5} 4th 3.9×10^{5}

compare the powers first

8

64×10^{3} is not in standard form. Write it in standard form.

$64 = 6.4 \times 10$, so $6.4 \times 10 \times 10^{3}$

Answer 6.4×10^{4}

Standard form: large numbers *further practice*

ANSWERS

9

Write 7.08×10^5 as an ordinary number.

7.08 × 100 000

Answer *708 000*

10

Which is bigger, 6.1×10^4 or 2.3×10^5? Explain how you know.

61 000 and 230 000

Answer 2.3×10^5

11

A forest has about 4 300 000 trees. Write this number in standard form.

4 300 000 ÷ 10 six times

Answer 4.3×10^6

12

Find the missing number.

$590\,000 =$ *5.9* $\times 10^5$

590 000 ÷ 100 000

13

Write these in order, largest first.

3.7×10^5 81 000

9.2×10^4 3.07×10^5

1st 3.7×10^5 2nd 3.07×10^5

3rd 9.2×10^4 4th 81 000

370 000, 81 000, 92 000, 307 000

14

A website had 6.4×10^5 visits in May and 1.2×10^6 visits in June. How many more visits were there in June than in May?

1 200 000 – 640 000

Answer 560 000

15

A number is 5×10^n. Written as an ordinary number, it has 7 digits. Find the value of n.

5 000 000 has 7 digits

Answer $n = 6$

16

Jo says 9.9×10^4 is bigger than 1.1×10^5, because 9.9 is bigger than 1.1. Is Jo right? Explain.

99 000 < 110 000, the powers first

Answer *No, it is smaller*