

Calculating with Standard Form

ANSWERS

1

Work out $(2 \times 10^3) \times (4 \times 10^5)$
Give your answer in standard form.

the numbers	the powers of 10
$2 \times 4 = 8$	$10^3 \times 10^5 = 10^8$

put them back together. Is it standard form?

$$8 \times 10^8$$

Answer 8×10^8

2

Work out $(3 \times 10^4) \times (2 \times 10^2)$
Give your answer in standard form.

the numbers	the powers of 10
$3 \times 2 = 6$	$10^4 \times 10^2 = 10^6$

put them back together. Is it standard form?

$$6 \times 10^6$$

Answer 6×10^6

3

Work out $(1.5 \times 10^6) \times (4 \times 10^3)$
Give your answer in standard form.

the numbers	the powers of 10
$1.5 \times 4 = 6$	$10^6 \times 10^3 = 10^9$

put them back together. Is it standard form?

$$6 \times 10^9$$

Answer 6×10^9

4

Work out $(8 \times 10^7) \div (2 \times 10^3)$
Give your answer in standard form.

the numbers	the powers of 10
$8 \div 2 = 4$	$10^7 \div 10^3 = 10^4$

put them back together. Is it standard form?

$$4 \times 10^4$$

Answer 4×10^4

5

Work out $(9 \times 10^8) \div (3 \times 10^2)$
Give your answer in standard form.

$9 \div 3 = 3$	$10^8 \div 10^2 = 10^6$
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$$3 \times 10^6$$

Answer 3×10^6

6

Work out $(4 \times 10^5) \times (6 \times 10^3)$
Give your answer in standard form.

$4 \times 6 = 24$	$10^5 \times 10^3 = 10^8$
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$$24 \times 10^8$$

Answer 2.4×10^9

7

Light travels 3×10^5 km every second.
How far does it travel in 2×10^3 seconds?

$$3 \times 2 \text{ and } 10^5 \times 10^3$$

Answer $6 \times 10^8 \text{ km}$

8

Which is bigger, 4×10^5 or 9×10^4 ?
Show how you know.

$$400\,000 \text{ and } 90\,000$$

Answer 4×10^5

Calculating with Standard Form *further practice*

ANSWERS

9

Work out $(8 \times 10^4) \times (5 \times 10^3)$
Give your answer in standard form.

$$40 \times 10^7, \text{ and } 40 = 4 \times 10$$

Answer 4×10^8

10

Work out $(3 \times 10^4)^2$
Give your answer in standard form.

$$(3 \times 10^4) \times (3 \times 10^4)$$

Answer 9×10^8

11

Find the missing power.

$$(4 \times 10^5) \times (2 \times 10^4) = 8 \times 10^9$$

$$5 + 4 = 9$$

Answer 4

12

Work out $(3 \times 10^8) \div (6 \times 10^2)$
Give your answer in standard form.

$$0.5 \times 10^6 = 500\,000$$

Answer 5×10^5

13

A factory makes 2.5×10^3 bottle tops every hour. How many bottle tops does it make in 4×10^2 hours?
Give your answer in standard form.

$$10 \times 10^5$$

Answer 1×10^6

14

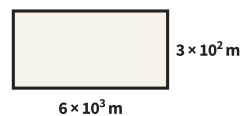
A reservoir holds 8×10^9 litres of water. A town uses 4×10^6 litres of water a day. If no more water goes into the reservoir, for how many days would its water last the town?
Give your answer as an ordinary number.

$$2 \times 10^3$$

Answer 2000 days

15

A field is a rectangle.
Work out its area. Give your answer in standard form.



$$18 \times 10^5$$

Answer $1.8 \times 10^6 \text{ m}^2$

16

Kim says $(3 \times 10^4) \times (2 \times 10^5) = 6 \times 10^{20}$ because $4 \times 5 = 20$.
Is Kim right? Explain.

$$\text{add the powers: } 4 + 5 = 9$$

Answer No, it is 6×10^9