

1 Large numbers: into standard form

a) Write 6000 in standard form.

$$6000 = \boxed{600} \times 10^1$$

b) Write 45 000 in standard form.

$$6000 = \boxed{60} \times 10^2$$

$$6000 = \boxed{6} \times 10^3$$

$$6000 = \boxed{6} \times 10^{\boxed{3}}$$

$$a) 6 \times 10^3$$

$$b) 4.5 \times 10^4$$

2 Large numbers: ordinary numbers

a) Write 4×10^3 as an ordinary number.

b) Write 2.5×10^4 as an ordinary number.

$$a) 4 \times 1000 = 4000$$

$$b) 2.5 \times 10\,000 = 25\,000$$

3 Comparing and ordering

a) Which is bigger, 6×10^3 or 2×10^4 ?

b) Write in order, smallest first: 5×10^3 , 2×10^5 , 9×10^4

$$a) 6000 \text{ and } 20\,000, \text{ so } 2 \times 10^4$$

$$b) 5000, 200\,000, 90\,000$$

$$b) 5 \times 10^3, 9 \times 10^4, 2 \times 10^5$$

4 Small numbers: into standard form

a) Write 0.006 in standard form.

$$0.006 = \boxed{0.06} \div 10^1$$

b) Write 0.0035 in standard form.

$$0.006 = \boxed{0.6} \div 10^2$$

$$0.006 = \boxed{6} \div 10^3$$

$$0.006 = \boxed{6} \times 10^{\boxed{-3}}$$

$$a) 6 \times 10^{-3}$$

$$b) 3.5 \times 10^{-3}$$

Standard form revision mat answers

Foundation B

5 Small numbers: ordinary numbers

a) Write 3×10^{-2} as an ordinary number.

b) Write 4.6×10^{-3} as an ordinary number.

$$a) 3 \div 100 = 0.03$$

$$b) 4.6 \div 1000 = 0.0046$$

6 Multiplying in standard form

Give your answers in standard form.

a) Work out $(4 \times 10^5) \times 2$

b) Work out $(2 \times 10^4) \times (4 \times 10^3)$

	the numbers	the powers of 10
a)	$4 \times 2 = 8$	10^5
b)	$2 \times 4 = 8$	$10^4 \times 10^3 = 10^7$

$$a) 8 \times 10^5$$

$$b) 8 \times 10^7$$

7 Dividing in standard form

Give your answers in standard form.

a) Work out $(8 \times 10^6) \div 2$

b) Work out $(6 \times 10^8) \div (3 \times 10^5)$

$$a) 8 \div 2 = 4: 4 \times 10^6$$

$$b) 6 \div 3 = 2, 8 - 5 = 3$$

$$b) 2 \times 10^3$$

8 Standard form problems

a) Use your calculator to work out $(1.6 \times 10^4) \times (3 \times 10^2)$. Give your answer in standard form.

b) A box holds 2×10^3 paper clips. How many paper clips are in 3 boxes? Give your answer in standard form.

$$a) 4.8 \times 10^6$$

$$b) 3 \times 2 = 6: 6 \times 10^3$$