## Investigate positive powers of 10



Match the numbers with the same value.

10<sup>6</sup>

10<sup>5</sup>

10<sup>4</sup>

10<sup>1</sup>

10<sup>8</sup>

10

10,000

100,000,000

1,000,000

100,000

1 billion = 1,000 million

1 trillion = 1,000 billion

Match the numbers with the same value.

1 million

100,000,000

1 billion

10,000,000,000

100 million

1,000,000,000

1 trillion

1,000,000

10 billion

1,000,000,000,000

- Write the numbers in ascending order.
  - a) 10 million

10<sup>8</sup>

10,000,000,000

1 billion

100 thousand

10<sup>10</sup>

- 1 billion
- 100 million
- $10^{7}$
- 1000,000,000,000

- a) Complete the pattern.

$$1,000 \times 10 = 10,000 = 10^4$$

b) Complete the statements.

a) Complete the pattern.

$$1,000,000 \div 10 = 100,000 = 10^{5}$$

b) Complete the statements.

## Investigate positive powers of 10





a) Complete the pattern.

$$1,000 \times 10 = 10,000 = 10^4$$

**b)** Complete the statements.



a) Complete the pattern.

$$1,000,000 \div 10 = 100,000 = 10^{5}$$

**b)** Complete the statements.

Brett works out 200 × 3,000

$$200 \times 3,000 = 2 \times 100 \times 3 \times 1,000$$

$$= 2 \times 3 \times 100 \times 1,000$$

$$= 6 \times 100,000$$

$$= 600,000$$

Work out the calculations.

a) 
$$3,000 \times 2,000$$

**b)** 
$$400 \times 20,000$$

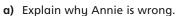
c) 
$$200 \times 1,000 \times 500$$



Annie is multiplying by powers of 10



Multiplying by powers of 10 is easy, you just add zeros.
So, 2.6 × 10 = 2.60 and
2.6 × 100 = 2.600



b) Correct Annie's mistakes.

$$2.6 \times 10$$
  $2.6 \times 100$ 

c) Work out the multiplications.

2.6 × 10,000	3.74 × 10,000
3.74 × 10	$1.8 \times 10^{4}$
3.74 × 1,000	$1.8 \times 10^{6}$
3.6 × 10,000	1.8 × 10 <sup>5</sup>
3.74 × 100	1.85 × 10 <sup>6</sup>

