RECALL

A: Complete these missing numbers

1) $3.556 = 3 + 0.5 + 0.05 +$ _____

2) $4.713 = 4 +$ _____ $+ 0.01 + 0.003$

3) $6.982 = 6 + 0.9 +$ _____ $+ 0.002$

4) $7 +$ _____ $+ 0.02 + 0.009 = 7.529$

5) $8 +$ _____ $= 8.006$

6) $1 + 0.3 +$ _____ $= 1.302$

B: Complete these missing numbers

1) $14.938 = 10 + 4 + 0.9 + 0.03 +$ _____

2) $45.709 = 40 + 5 +$ _____ $+ 0.009$

3) $26.049 = 0.4 +$ _____ $+ 6 + 20$

4) $10 + 9 +$ _____ $+ 0.21 + 0.004 = 19.914$

5) $21.608 = 20 + 1 + 0.5 +$ _____ $+ 0.016$

6) $37.059 = 30 + 6 + 0.3 +$ _____ $+ 0.03 + 0.009$

RECALL ANSWERS

A: Complete these missing numbers

1) $3.556 = 3 + 0.5 + 0.05 + 0.006$

2) $4.713 = 4 + 0.7 + 0.01 + 0.003$

3) $6.982 = 6 + 0.9 + 0.08 + 0.002$

4) $7 + 0.5 + 0.02 + 0.009 = 7.529$

5) $8 + 0.006 = 8.006$

6) $1 + 0.3 + 0.002 = 1.302$

B: Complete these missing numbers

1) $14.938 = 10 + 4 + 0.9 + 0.03 + 0.008$

2) $45.709 = 40 + 5 + 0.7 + 0.009$

3) $26.049 = 0.04 + 0.009 + 6 + 20$
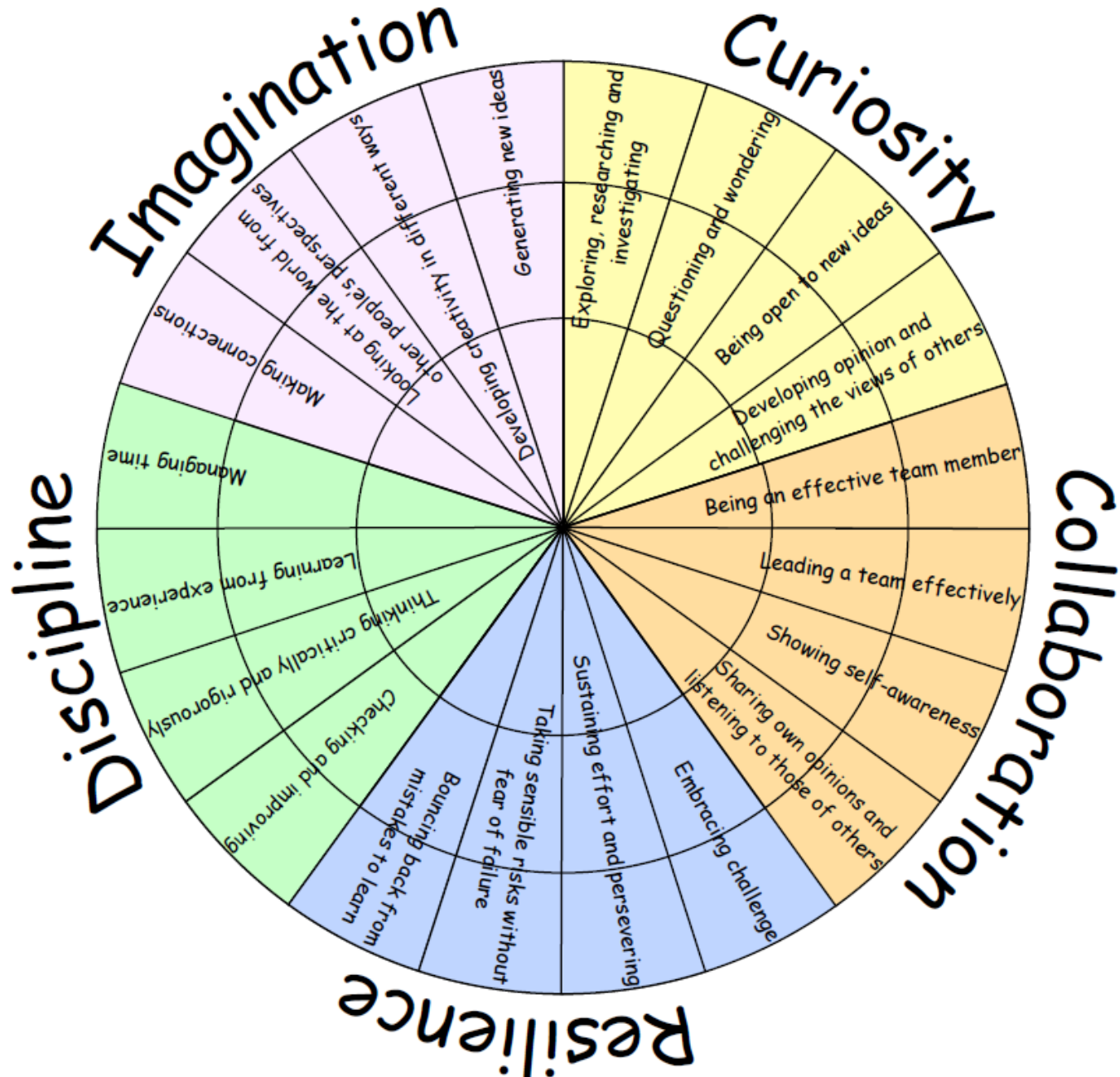
4) $10 + 9 + 0.7 + 0.21 + 0.004 = 19.914$

5) $21.608 = 20 + 1 + 0.5 + 0.092 + 0.016$

6) $37.059 = 30 + 6 + 0.3 + 0.72 + 0.03 + 0.009$

I CAN MULTIPLY DECIMALS BY 10, 100 AND 1000

Decimals (14v)

LEARNING HABITS?

A circular learning habits wheel divided into six coloured sections:

Curiosity (yellow): Exploring, researching and investigating; Questioning and wondering; Being open to new ideas; Developing opinion and challenging the views of others

Collaboration (orange): Being an effective team member; Leading a team effectively; Showing self-awareness; Sharing own opinions and listening to those of others; Embracing challenge

Resilience (blue): Sustaining effort and persevering; Taking sensible risks without fear of failure; Bouncing back from mistakes to learn

Discipline (green): Checking and improving; Thinking critically and rigorously; Learning from experience; Managing time

Imagination (purple): Making connections; Looking at the world from other people's perspectives; Developing creativity in different ways; Generating new ideas

GUIDED PRACTICE

1) Each plate has a mass of 0.3 kg.

What is the mass of the 10 plates altogether?

2) Each glass has a mass of 0.25 kg.

What is the total mass of all the glasses?

How many different ways can you show these calculations?

INTELLIGENT PRACTICE

Complete these calculations

1) 5.2 x 10 =

2) 5.2 x 100 =

3) 5.2 x 1,000 =

Complete these calculations

1) 0.12 x 10 =

2) 1.02 x 100 =

3) 10.02 x 1,000 =

Complete these calculations

1) 50.2 x 10 =

2) 5.02 x 100 =

3) 0.502 x 1,000 =

6.7 x 10 =

6.7 x 20 =

6.7 x 200 =

INTELLIGENT PRACTICE

Complete these calculations

1) 5.2 x 10 = 52

2) 5.2 x 100 = 520

3) 5.2 x 1,000 = 5200

Complete these calculations

1) 0.12 x 10 = 1.2

2) 1.02 x 100 = 102

3) 10.02 x 1,000 = 10020

Complete these calculations

1) 50.2 x 10 = 502

2) 5.02 x 100 = 502

3) 0.502 x 1,000 = 502

6.7 x 10 = 67

6.7 x 20 = 134

6.7 x 200 = 1340

DIVE DEEPER 1

1) Complete the calculations and sentences.

Th	H	T	O	Tth	Hth
			●●	●●	
				●	

a) 2.3 x 10 =
When the number is multiplied by 10 the counters move __ place to the left.

b) 2.3 x 100 =
When the number is multiplied by 100 the counters move __ places to the left.

c) 2.3 x 1000 =
When the number is multiplied by 1000 the counters move __ places to the left.

2) Complete the diagram

3.06 → × 10 → [   ] → × 10 → [   ]

DIVE DEEPER 1 ANSWERS

1) Complete the calculations and sentences.

Th	H	T	O	Tth	Hth

a) 2.3 x 10 = 23
When the number is multiplied by 10 the counters move 1 place to the left.

b) 2.3 x 100 = 230
When the number is multiplied by 100 the counters move 2 places to the left.

c) 2.3 x 1000 = 2300
When the number is multiplied by 1000 the counters move 3 places to the left.

2) Complete the diagram

3.06 →(× 10)→ 30.6 →(× 10)→ 306

DIVE DEEPER 2

3) Complete these calculations

4.4 x 1 =
4.4 x 10 =
4.4 x 100 =
4.4 x 1,000=

What do you notice?
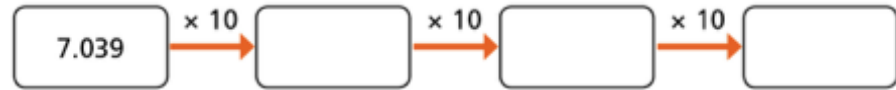
4) Complete these diagrams.

What do you notice? Why does this happen?

5) Write < > or = to compare the number sentence.

1.4 x 10 x 10 x 10 _____ 1.4 x 1,000

1.4 x 10 x 100 _____ 1.4 x 1,000

1.4 x 10 x 10 _____ 1.4 x 1,000

1.4 x 10 x 2 _____ 1.4 x 100

6) Kim is calculating 14.3 x 200

She write this as her answer. 14.3 x 200 = 28.600

Explain Kim's mistake.

DIVE DEEPER 2 ANSWERS

3) Complete these calculations

4.4 x 1 = 4.4
4.4 x 10 = 44
4.4 x 100 = 440
4.4 x 1,000= 4400

What do you notice?
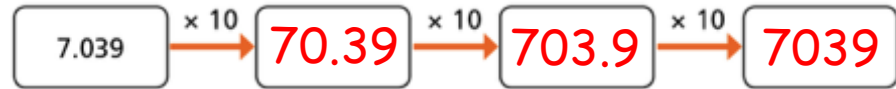
4) Complete these diagrams.

7.039 →(× 10)→ 70.39 →(× 10)→ 703.9 →(× 10)→ 7039

7.039 →(× 100)→ 703.9 →(× 10)→ 7039

7.039 →(× 1,000)→ 7039

What do you notice? Why does this happen?

5) Write < > or = to compare the number sentence.

1.4 x 10 x 10 x 10 = 1.4 x 1,000
1.4 x 10 x 100 = 1.4 x 1,000
1.4 x 10 x 10 < 1.4 x 1,000
1.4 x 10 x 2 < 1.4 x 100

6) Kim is calculating 14.3 x 200

She write this as her answer. 14.3 x 200 = 28.600

Kim has only multiplied 14.3 by 2 but not then multiplied the answer by 100

DIVE DEEPER 3

Use the cards to complete the calculation.
You can use each card more than once.

| × 1 | × 10 | × 100 | × 1,000 |

0.002 ☐ ☐ ☐ = 2,000

How many ways is it possible to complete this calculation?

Complete each calculation.

a) 0.025 × 100 = 10 × _____
    1,000 × 1.01 = 101 × _____
    _____ × 1,000 = 10 × 9

3.5 × 40 = 400 × _____
2.5 × 200 = _____ × 100
5,000 × _____ = 50 × 3

b) 0.004 × ▲ = ★ × 0.04

How many different solutions can you find?

DIVE DEEPER 4

An artist uses tiles to make a mosaic border along a wall. The height of the mosaic is 20 tiles and the width is 500 tiles.
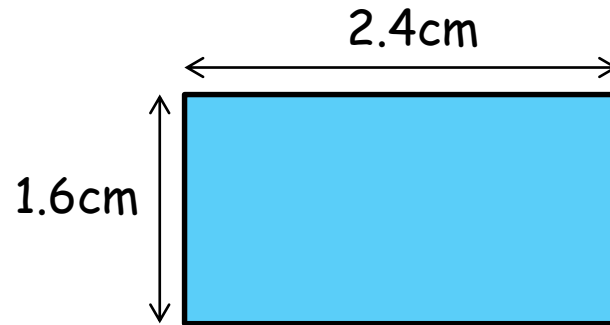
2.4cm

1.6cm

Each tile is 2.4 cm wide and 1.6 cm high.

What is the height and width of the whole mosaic in centimetres?

The height of the mosaic is ___ and width is ___.

SELF-ASSESSMENT

- Some will even be able think how multiplying by 10, 100 and 1,000 links to multiples of 10 eg. X 20, x 200 or x 2,000

- Some will be able explain how multiplying by 10, 100 and 1,000

- Most will be able to explain a rule to help multiply decimals by 10, 100 and 1000

- All will be able to use a place value chart to help multiply decimals by 10, 100 and 1000