



Key Instant Recall Facts

Year 6 – Spring 1

I can convert between decimals, fractions and percentages.

$$\frac{1}{2} = 0.5$$

$$\frac{1}{4} = 0.25$$

$$\frac{3}{4} = 0.75$$

$$\frac{1}{10} = 0.1$$

$$\frac{1}{5} = 0.2$$

$$\frac{3}{5} = 0.6$$

$$\frac{9}{10} = 0.9$$

$$\frac{1}{100} = 0.01$$

$$\frac{7}{100} = 0.07$$

$$\frac{21}{100} = 0.21$$

$$\frac{75}{100} = 0.75$$

$$\frac{99}{100} = 0.99$$

Key Vocabulary

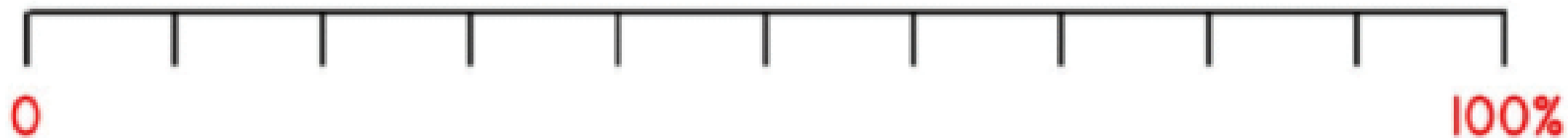
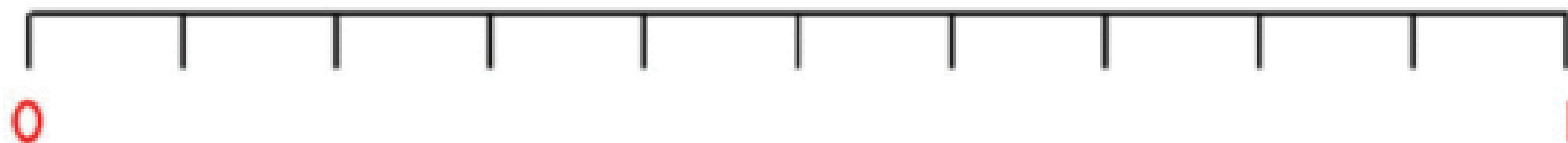
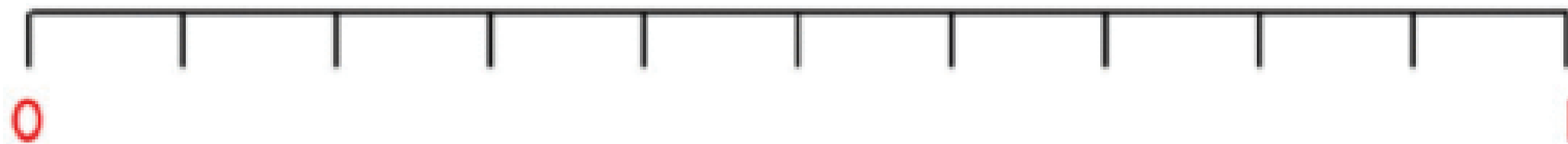
How many **tenths** is 0.8?

How many **hundredths** is 0.12?

Write 0.75 as a **fraction**?

Write $\frac{1}{4}$ as a **decimal**?

FRACTION DECIMAL PERCENT NUMBER LINES 0 TO 1



RECALL

A: Complete these missing numbers

1) $3.556 = 3 + 0.5 + 0.05 + \underline{\hspace{1cm}}$

2) $4.713 = 4 + \underline{\hspace{1cm}} + 0.01 + 0.003$

3) $6.982 = 6 + 0.9 + \underline{\hspace{1cm}} + 0.002$

4) $7 + \underline{\hspace{1cm}} + 0.02 + 0.009 = 7.529$

5) $8 + \underline{\hspace{1cm}} = 8.006$

6) $1 + 0.3 + \underline{\hspace{1cm}} = 1.302$

B: Complete these missing numbers

1) $14.938 = 10 + 4 + 0.9 + 0.03 + \underline{\hspace{1cm}}$

2) $45.709 = 40 + 5 + \underline{\hspace{1cm}} + 0.009$

3) $26.049 = 0.4 + \underline{\hspace{1cm}} + 6 + 20$

4) $10 + 9 + \underline{\hspace{1cm}} + 0.21 + 0.004 = 19.914$

5) $21.608 = 20 + 1 + 0.5 + \underline{\hspace{1cm}} + 0.016$

6) $37.059 = 30 + 6 + 0.3 + \underline{\hspace{1cm}} + 0.03 + 0.009$

A: Complete these missing numbers

1) $3.556 = 3 + 0.5 + 0.05 + \textcolor{red}{0.006}$

2) $4.713 = 4 + \textcolor{red}{0.7} + 0.01 + 0.003$

3) $6.982 = 6 + 0.9 + \textcolor{red}{0.08} + 0.002$

4) $7 + \textcolor{red}{0.5} + 0.02 + 0.009 = 7.529$

5) $8 + \textcolor{red}{0.006} = 8.006$

6) $1 + 0.3 + \textcolor{red}{0.002} = 1.302$

B: Complete these missing numbers

1) $14.938 = 10 + 4 + 0.9 + 0.03 + \textcolor{red}{0.008}$

2) $45.709 = 40 + 5 + \textcolor{red}{0.7} + 0.009$

3) $26.049 = 0.04 + \textcolor{red}{0.009} + 6 + 20$

4) $10 + 9 + \textcolor{red}{0.7} + 0.21 + 0.004 = 19.914$

5) $21.608 = 20 + 1 + 0.5 + \textcolor{red}{0.092} + 0.016$

6) $37.059 = 30 + 6 + 0.3 + \textcolor{red}{0.72} + 0.03 + 0.009$

L.O. - TO MULTIPLY DECIMALS BY 10, 100 AND 1000

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

GUIDED PRACTICE – MY TURN



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?

help

Use a place value chart to help you.



Table cloths weigh 0.4kg. How much will 30 weigh?

GUIDED PRACTICE – OUR TURN



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?

help

Use a place value chart to help you.



Table cloths weigh 0.4kg. How much will 30 weigh?

GUIDED PRACTICE – YOUR TURN



1) Each plate has a mass of 0.7 kg.

What is the mass of the 10 plates altogether?

2) Each glass has a mass of 0.35 kg.

What is the total mass of all the glasses?

help

Use a place value chart to help you.



Table cloths weigh 0.4kg. How much will 40 weigh?

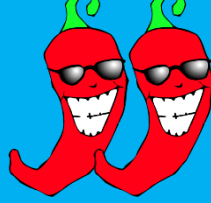


Complete these calculations

1) $5.2 \times 10 =$

2) $5.2 \times 100 =$

3) $5.2 \times 1,000 =$

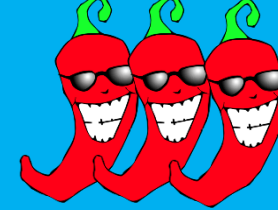


Complete these calculations

1) $0.12 \times 10 =$

2) $0.12 \times 100 =$

3) $0.12 \times 1,000 =$



Complete these calculations

1) $50.2 \times 10 =$

2) $5.02 \times 100 =$

3) $0.502 \times 1,000 =$



$6.7 \times 10 =$

$6.7 \times 20 =$

$6.7 \times 200 =$

$7.6 \times 10 =$

$7.6 \times 30 =$

$7.6 \times 300 =$

Complete these calculations

1) $5.2 \times 10 = 52$

2) $5.2 \times 100 = 520$

3) $5.2 \times 1,000 = 5200$

Complete these calculations

1) $0.12 \times 10 = 1.2$

2) $0.12 \times 100 = 12$

3) $0.12 \times 1,000 = 120$

Complete these calculations

1) $50.2 \times 10 = 502$

2) $5.02 \times 100 = 502$

3) $0.502 \times 1,000 = 502$

$6.7 \times 10 = 67$

$6.7 \times 20 = 134$

$6.7 \times 200 = 1340$

$7.6 \times 10 = 76$

$7.6 \times 30 = 228$

$7.6 \times 300 = 2280$



DIVE DEEPER 1

1) Complete the calculations and sentences.

Th	H	T	O	Tth	Hth
			● ●	● ● ●	

a) $2.3 \times 10 =$

When the number is multiplied by 10 the counters move __ place to the left.

b) $2.3 \times 100 =$

When the number is multiplied by 100 the counters move __ places to the left.

c) $2.3 \times 1000 =$

When the number is multiplied by 1000 the counters move __ places to the left.

3) Complete these calculations

$4.4 \times 1 =$

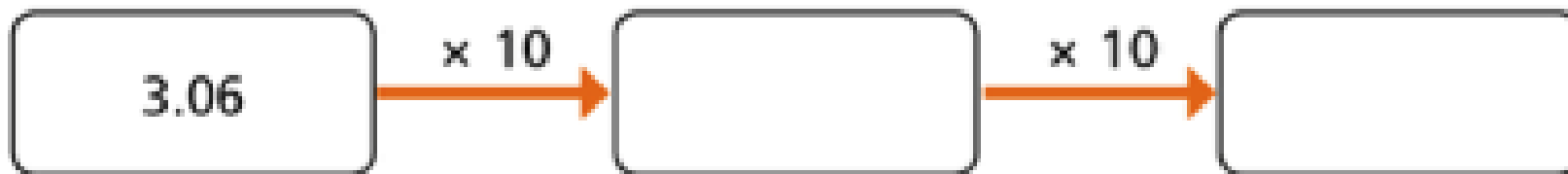
$4.4 \times 10 =$

$4.4 \times 100 =$

$4.4 \times 1,000 =$

What do you notice?

2) Complete the diagram



DIVE DEEPER 1 ANSWERS

1) Complete the calculations and sentences.

Th	H	T	O	Tth	Hth
			● ● ● ● ●	● ● ● ● ●	

a) $2.3 \times 10 = 23$

When the number is multiplied by 10 the counters move **1** place to the left.

b) $2.3 \times 100 = 230$

When the number is multiplied by 100 the counters move **2** places to the left.

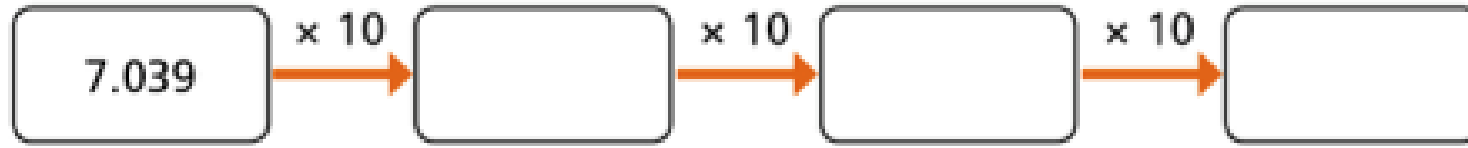
c) $2.3 \times 1000 = 2300$

When the number is multiplied by 1000 the counters move **3** places to the left.

2) Complete the diagram

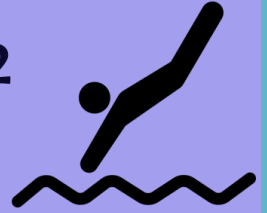


4) Complete these diagrams.



What do you notice? Why does this happen?

DIVE DEEPER 2



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

$1.4 \times 10 \times 10 \times 10$ ____ $1.4 \times 1,000$

$1.4 \times 10 \times 100$ ____ $1.4 \times 1,000$

$1.4 \times 10 \times 10$ ____ $1.4 \times 1,000$

$1.4 \times 10 \times 2$ ____ 1.4×100



Kim is calculating 14.3×200

She write this as her answer. $14.3 \times 200 = 28.600$

Answer, prove and explain Kim's mistake.



APE

DIVE DEEPER 2 ANSWERS

3) Complete these calculations

$$4.4 \times 1 = 4.4$$

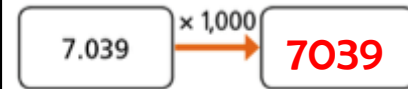
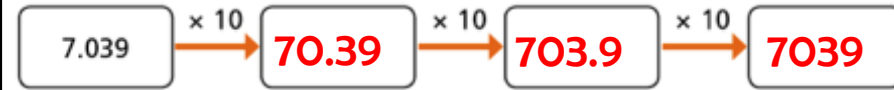
$$4.4 \times 10 = 44$$

$$4.4 \times 100 = 440$$

$$4.4 \times 1,000 = 4400$$

What do you notice?

4) Complete these diagrams.



What do you notice? Why does this happen?

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

$$1.4 \times 10 \times 10 \times 10 = 1.4 \times 1,000$$

$$1.4 \times 10 \times 100 = 1.4 \times 1,000$$

$$1.4 \times 10 \times 10 < 1.4 \times 1,000$$

$$1.4 \times 10 \times 2 < 1.4 \times 100$$



Kim is calculating 14.3×200

She write this as her answer. $14.3 \times 200 = 28.600$



APE

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



9a. Which number does not belong?
Convince me.

A. 4,710,000

B. 74,120

C. 7,412

D. 471,000

E. 741,200

F. 47,100

G. 417

9b. Which number does not belong?
Convince me.

A. 6,324

B. 2,897

C. 632,400

D. 54,236

E. 542,360

F. 28,970

G. 280,970

CHALLENGE