

24.01.22

How do you partition a decimal number?

- i** Alex has 3 boxes of eggs.
There are 6 eggs in each box.
He takes one egg out of each box.
Circle the calculation that shows the total number of eggs in the boxes now.
- $(3 \times 6) - 1$ $3 \times (6 - 1)$ $3 \times 6 - 1$

Vocabulary check

Decimal

Partition

How many tenths, hundredths, thousandths

0.532

0.467

Partition these numbers

0.532

8.451

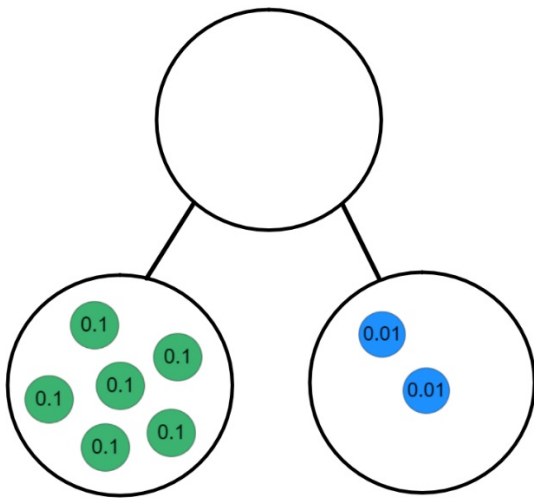
9.067

0.532



8.451

9.067

What number?



How else could you partition 0.62?

Ones	Tenths (1/10)	Hundredths (1/100)	Thousandths (1/1000)
			

$$\text{0.1} = ? \text{0.01}$$

Is this 0.62? Why?

Ones	Tenths ($1/10$)	Hundredths ($1/100$)	Thousandths ($1/1000$)
	0.1 0.1	0.01 0.01	
	0.1 0.1	0.01 0.01	
	0.1	0.01 0.01	
		0.01 0.01	
		0.01 0.01	
		0.01 0.01	

Can you partition 0.62 in a different way?

How many ways?

You have a pile of 0.1 coins and a pile of 0.01 coins.

Make 0.32



Task - Partition each number in 4 different ways.

0.34

0.563

0.51

0.609

0.63

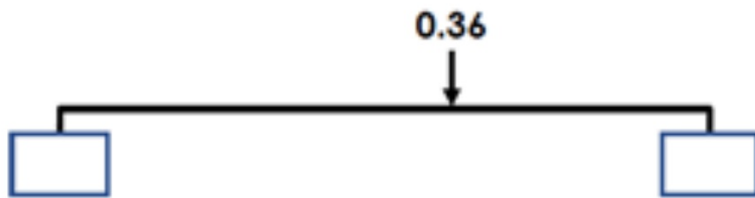
2.345

3.4

5.032

Plenary

What could the start and end numbers be?



25.1.22

What happens when you multiply by 10, 100 and 1000?

12 Work out the missing numbers.

$$2 \times 3 + 4 \times \square = 70$$

$$2 \times (3 + 4) \times \square = 70$$

Gattengo Chart

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

What do you notice?

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$0.1 \times 10 = \square$$

$$0.04 \times 10 = \square$$

$$0.06 \times 10 = \square$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$0.1 \times 10 = 1$$

$$0.04 \times 10 = 0.4$$

$$0.06 \times 10 = 0.6$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$1.3 \times 10 = \square$$

$$2.4 \times 10 = \square$$

$$3.05 \times 10 = \square$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$1.3 \times 10 = 13$$

$$2.4 \times 10 = 24$$

$$3.05 \times 10 = 30.5$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$2.5 \times 100 = \boxed{}$$

$$3.04 \times 100 = \boxed{}$$

$$4.81 \times 100 = \boxed{}$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$2.5 \times 100 = 250$$

$$3.04 \times 100 = 304$$

$$4.81 \times 100 = 481$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$34 \times 1000 = \boxed{}$$

$$2.6 \times 1000 = \boxed{}$$

$$0.367 \times 1000 = \boxed{}$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$34 \times 1000 = 34,000$$

$$2.6 \times 1000 = 2,600$$

$$0.367 \times 1000 = 367$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

How can we use the chart to help us find the missing number?

$$3.4 \times \square = 34$$

$$\square \times 100 = 560$$

$$72 = \square \times 10$$

$$\square \times 1000 = 1400$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

How can we use the chart to help us find the missing number?

$$3.4 \times 10 = 34$$

$$5.6 \times 100 = 560$$

$$72 = 7.2 \times 10$$

$$1.4 \times 1000 = 1400$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

Task

With a partner explore what happens when you multiply by 10, 100 and 1000.

Write a statement to explain.

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

Task

a) $1.3 \times 10 =$

c) $1.1 \times 10 =$

e) $1.02 \times 10 =$

g) $32.4 \times \square = 324$

i) $\square \times 100 = 208$

k) $\square = 99.9 \times 100$

m) $0.999 \times 100 =$

b) $3.03 \times 10 =$

d) $1.2 \times 10 =$

f) $\square = 1.02 \times 100$

h) $1.562 \times 1000 =$

j) $4.3 \times \square = 86$

l) $\square = 999.9 \times 100$

n) $9.999 \times 1000 =$

26.1.22

How does the value of each digit change?

What did you find out from using the Gattengo chart yesterday?

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

Which counter has the highest value?

How many times greater is the red counter compared to the blue counter?

$$0.3 \times 10 = 3$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

What is the relationship between numbers in each column of the Gattegno chart.

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

The counter is on 0.5 if it moves to 50 how much has it moved?

100	200	300	400	500	600	700	800	900
10	20	30	$\times 10$	50	60	70	80	90
1	2	3	$\times 10$	5	6	7	8	9
0.1	0.2	0.3	$\times 10$	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

$$0.5 \times 10 \times 10 = 50$$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

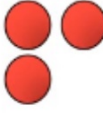


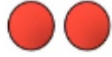
$$0.5 \times 10 \times 10 = 50$$

$$0.5 \times 100 = 50$$

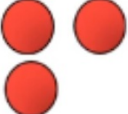


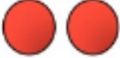
$$0.6 \times 1,000 =$$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

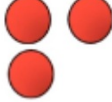



$$3.12 \times 10 =$$

Th	H	T	O	•	tth	hth
						
			3	•	1	2

$$3.12 \times 10 =$$

Th	H	T	O	•	tth	hth
						
		3		•	1	2

$$3.12 \times 10 =$$


Th	H	T	O	•	tth	hth
						
		3	1	•		2

$$3.12 \times 10 = 31.2$$

Th	H	T	O	•	tth	hth
		● ● ●	●	●	● ●	
		3	1	•	2	

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

$$3.12 \times 100 =$$

Th	H	T	O	tth	hth
					
			3	1	2

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

$$3.12 \times 1,000 =$$

Have a think



Th	H	T	O	tth	hth
			3	1	2

When the number is multiplied by 1,000 the counters move _____ places to the _____.

Task 1

TTh	Th	H	T	O	●	t	h	th
					●			

Use the place value chart to help to complete the following

a) $2.1 \times 10 =$

b) $3.07 \times 100 =$

c) $6.902 \times 100 =$

d) $7.067 \times 1000 =$

e) $\times 10 = 76.98$

f) $\times 1000 = 7698$

Use $>$, $<$ or $=$ to complete the sentences

$$7.2 \times 10 \times 10 \quad \bigcirc \quad 7.2 \times 1,000$$

$$7.2 \times 100 \times 10 \quad \bigcirc \quad 7.2 \times 1,000$$

$$4.2 \times 200$$



Rosie

You could do
 $4.2 \times 100 \times 2$

I disagree, there are two hundreds so
it would be
 $4.2 \times 100 \times 100$



Amir



Dora

I think it'd be
 $4.2 \times 2 \times 100$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

$$4.2 \times 100 \times 2$$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

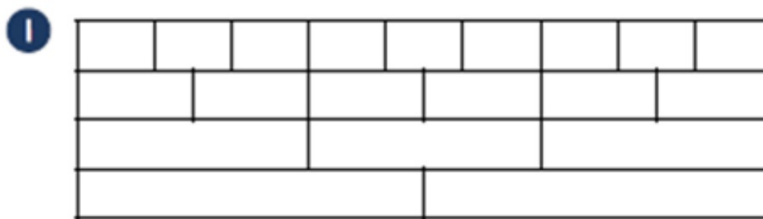
$$4.2 \times 2 \times 100 =$$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

$$4.2 \times 100 \times 100$$

27.1.22

What happens when you divide by 10, 100 and 1,000?



Use the fraction bars to simplify the fractions.

$$\frac{6}{9} =$$

$$5\frac{3}{6} =$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

What do you know about the Gattengo chart?

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$1.36 \div 10 = \boxed{}$$

$$107 \div 10 = \boxed{}$$

$$5 \div 10 = \boxed{}$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$1.36 \div 10 = 0.136$$

$$107 \div 10 = 10.7$$

$$5 \div 10 = 0.5$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$44 \div 100 = \boxed{}$$

$$1.36 \div 100 = \boxed{}$$

$$107 \div 100 = \boxed{}$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$44 \div 100 = 0.44$$

$$1.36 \div 100 = 0.0136$$

$$107 \div 100 = 1.07$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$1.36 \div 1000 = \boxed{}$$

$$107 \div 1000 = \boxed{}$$

$$5 \div 1000 = \boxed{}$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

$$1.36 \div 1000 = 0.00136$$

$$107 \div 1000 = 0.107$$

$$5 \div 1000 = 0.005$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

Use the chart to find the value of the missing numbers.

$$3.4 \div \boxed{} = 0.34$$

$$84 = \boxed{} \div 10$$

$$\boxed{} \div 100 = 0.067$$

$$0.0907 = 90.7 \div \boxed{}$$

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

Use the chart to find the value of the missing numbers.

$$3.4 \div 10 = 0.34$$

$$84 = 840 \div 10$$

$$6.7 \div 100 = 0.067$$

$$0.0907 = 90.7 \div 1000$$

15.1.21

How does the value of each digit change?

10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

What did you find out yesterday when dividing a number by 10, 100 and 1000 using the Gattengo chart?

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

$$0.3 \times 10 = 3$$

$$3 \div 10 = 0.3$$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09




$$80 \div 10 \div 10 = 0.8$$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	÷ 100		8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

$$80 \div 10 \div 10 = 0.8$$

$$80 \div 100 = 0.8$$

$$210 \div 10 =$$

Th	H	T	O	•	tth	hth
						
	2	1	0	•		

$$210 \div 10 =$$

Th	H	T	O	•	tth	hth
	● ●		●	●		
	2		1	●		




When the number is divided by 10 the counters move _____ place to the _____.

$$210 \div 10 = 21$$

Th	H	T	O	•	tth	hth
		● ● ●	●	●		
		2	1	●		

When the number is divided by 10 the counters move 1 place to the right.

$$210 \div 100 =$$

Th	H	T	O	•	tth	hth
						
	2	1	0	•		

When the number is divided by 100 the counters move _____ places to the _____.

$$210 \div 100 = 2.1$$

Th	H	T	O	•	tth	hth
			● ● ●	●	●	
			2	•	1	

When the number is divided by 100 the counters move 2 places to the right.

$$210 \div 1,000 =$$

Have a think



Th	H	T	O	•	tth	hth
	● ●	●		●		
	2	1	0	●		

When the number is divided by 1,000 the counters move _____ places to the _____.

$$210 \div 1,000 =$$

Th	H	T	O	tth	hth
				● ● ●	●
			0	● 2	1

When the number is divided by 1,000 the counters move 3 places to the right.

Task

Use the place value grid to help you divide the numbers.

a) $56.1 \div 100 =$ b) $70.3 \div 1000 =$ c) $6.06 \div 10 =$

d) $702 \div 100 =$ e) $3.45 \div \text{-----} = 0.345$

f) $6.09 \div \text{-----} = 0.0609$

Insert $<$, $>$ or $=$ to make the statements correct

a) $15.62 \div 10 \div 10 \div 10$ ----- $15.62 \div 1000$

b) $81 \div 100$ ----- $81 \div 10 \div 10$

c) $4.6 \div 10$ ----- $46 \div 100$

$$\square \div 20 = 2.04$$



We could use the inverse and do
 2.04×20

That's a great idea Rosie! We could do
 $2.04 \times 2 \times 10$



Let's use a Gattegno chart to help us!

$$\square \div 20 = 2.04$$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

$$2.04 \times 2 \times 10$$

$$\square \div 20 = 2.04$$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

$$2.04 \times 2 \times 10$$

$$40.8 \div 20 = 2.04$$

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

$$2.04 \times 2 \times 10 = 40.8$$

Task

$240 \div 200 =$

$240 \div 6000 =$

$240 \div 300 =$

$240 \div 4000 =$

$240 \div 400 =$

$240 \div 3000 =$

$240 \div 600 =$

$240 \div 8000 =$

Plenary

When you divide by the digit moves place to the .

When you divide by the digit moves places to the .

When you divide by the digit moves places to the .

Plenary

When you divide by 10 the digit moves 1 place to the right.

When you divide by 100 the digit moves 2 places to the right.

When you divide by 1000 the digit moves 3 places to the right.

