Year 4 Maths, 26/2/21

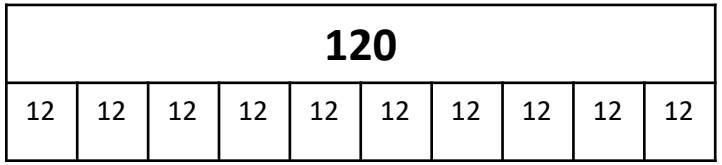
RECALL: dividing by 10

When we divide a number by ten, it is split into ten equal parts.

It gets ten times smaller.

120 ÷ 10

This means 120 split into 10 equal parts. Each part will be ten times smaller than 120.



This question is quite easy because 120 is a multiple of ten. We can count how many tens are in 120 to find the answer.

But what if we want to divide a number that's not in the ten times table by ten?

GUIDED PRACTICE

Let's look again at 120 ÷ 10 = 10, this time on a place value table.

hundreds	tens	ones	tenths
●	● ●		
		●	

120

Every time we move one column to the right, the value of the column is ten times less. So to divide a number by ten we move all the counters **<u>one column to the right</u>**.

<u>We can do the same to divide any number by ten.</u>

hundreds	tens	ones	tenths
	●	● ●	
		●	

12

GUIDED PRACTICE

Let's try 2 ÷ 10. That means 2 split into ten equal parts. The answer will be ten times smaller than 2.

hundreds	tens	ones	tenths
		● ●	●

2

We can start by putting two counters in the ones column.

hundreds	tens	ones	tenths
		●	● ●

0.2

To divide by ten, we just have to move the counters one column to the right. When we write the answer, we must remember to show that the ones column is empty (by using a zero) and including the decimal point.

LO: I can divide any whole number by ten

- SOME WILL EVEN convert between millimetres and metres, dividing by ten
- SOME will more than one digit by ten
- MOST will divide one digit by ten
- ALL will use place value to divide by ten

INTELLIGENT PRACTICE

One chilli

Use the method shown to solve:

$3 \div 10 = \square$ $7 \div 10 = \square$ $\square = 4 \div 10$

Two chillies: use the place value grid to solve:

$73 \div 10 = \square$ $243 \div 10 = \square$ $\square = 87 \div 10$

hundreds	tens	ones	tenths

Three chillies

On a place value grid, you move one column to the _____ to divide by ten.

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

In the grid above, you move one square _____ to divide by ten. If you move one square up, you _____ by ten.

INTELLIGENT PRACTICE answers

One chilli

Use the method shown to solve:

$3 \div 10 = 0.3$ $7 \div 10 = 0.7$ $0.4 = 4 \div 10$

Two chillies: use the place value grid to solve:

$73 \div 10 = 7.3$ $243 \div 10 = 24.3$ $8.7 = 87 \div 10$

hundreds	tens	ones	tenths

Three chillies

On a place value grid, you move one column to the **right** to divide by ten.

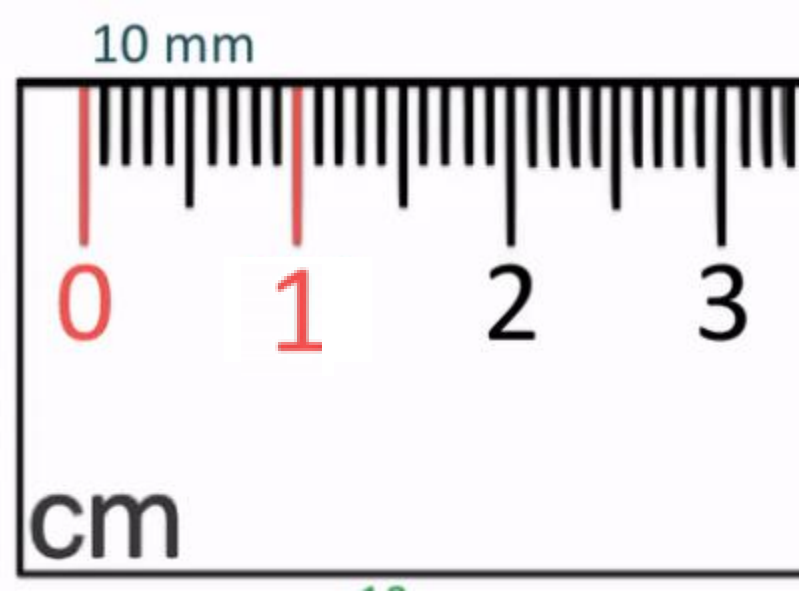
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

In the grid above, you move one square **down** to divide by ten. If you move one square up, you **multiply** by ten.

DIVE DEEPER

There are 10 millimetres in a centimetre.

To convert from millimetres to centimetres, you divide by ten.



52mm = _____cm

179mm = _____cm

8mm = _____cm

Farmer Jack grew this carrot.

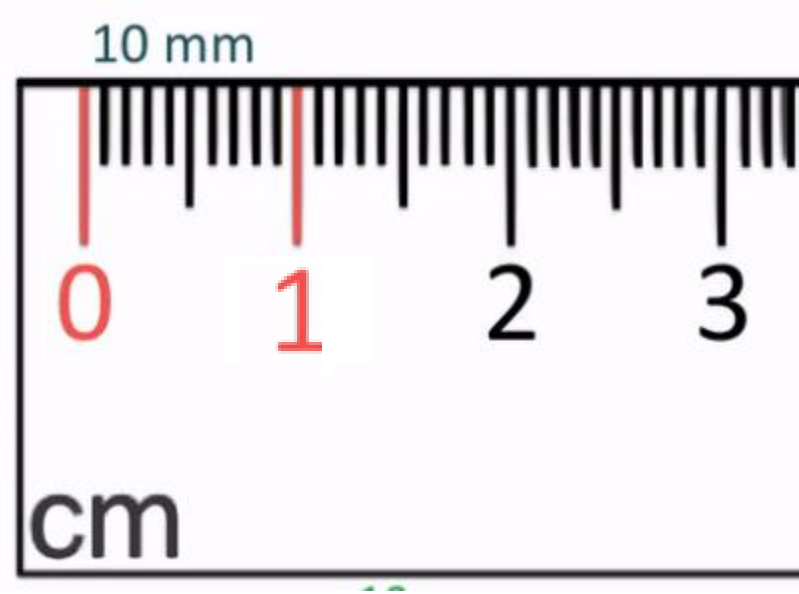
Farmer Fred grew this carrot.

How much bigger is Jack's carrot? Give your answer in mm.

DIVE DEEPER answers

There are 10 millimetres in a centimetre.

To convert from millimetres to centimetres, you divide by ten.



52mm = 5.2cm

179mm = 17.9cm

8mm = 0.8cm

Farmer Jack grew this carrot.

Farmer Fred grew this carrot.

How much bigger is Jack's carrot? Give your answer in mm.

124mm – 116mm = 8mm

Self assessment: how did you do?

- SOME WILL EVEN convert between millimetres and metres, dividing by ten — Did you get the Dive Deeper questions right?
- SOME will more than one digit by ten — Did you get the two chilli questions right?
- MOST will divide one digit by ten — Did you get the one chilli questions right?
- ALL will use place value to divide by ten — Did you use the place value table to investigate dividing by ten?