



MATH WITH MR DJ

GRADE 5 · MEASUREMENT & DATA

LINE PLOTS WITH FRACTIONS

Today's goal: I can make a line plot to display a data set of measurements in fractions.



Tan



Digit



Blaze



Pi



The axis is a number line

- 1 Equal steps of the smallest unit in the data.
- 2 Eighths in the data → the axis is eighths.

TURN & TALK

A mark with no dots still belongs there.

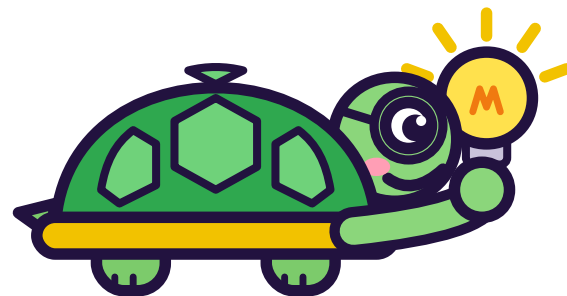


And $1/8$ comes before $1/2$

1 8 is bigger than 2. The PIECE is smaller.

REMEMBER

$1/8 = 1/8$. $1/2 = 4/8$. Four times as big.



BIG IDEA 2

Eight beakers

1 $1/4$: 2 dots $1/2$: 1 $3/4$: 4 1 : 1

REMEMBER

8 dots. 4 labels. Two different numbers.



BIG IDEA 3

How much altogether?

1 Every dot counts: $2 \times \frac{1}{4} + \frac{1}{2} + 4 \times \frac{3}{4} + 1$.

REMEMBER

5 litres. Not $2\frac{1}{2}$ – that is the labels.



BIG IDEA 4

Share it equally

1 5 litres $\div$ 8 beakers.

REMEMBER

5/8 each. It is not a value on the plot.



WATCH OUT!

A warning

1 Adding the labels and dividing by 4 ALSO gives $\frac{5}{8}$.

2 Both halved. The halvings cancelled.

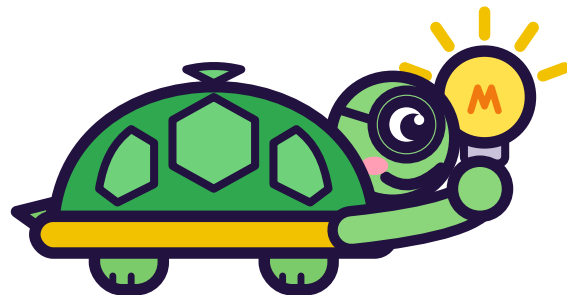
DON'T FALL FOR IT

A right answer does not prove a method.



Remember

- 1 The axis runs in equal steps of the smallest unit, empty marks included.
- 2 Total by counting every dot.
- 3 Redistribute by dividing the total by the number of measurements.



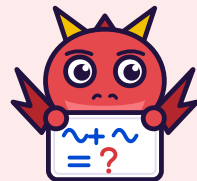
Pick your pepper!



☹☹ MEDIUM

Six cups measure $\frac{1}{8}$ three times, $\frac{1}{2}$ twice and $\frac{7}{8}$ once. Draw the line plot.

#1 on your practice sheet

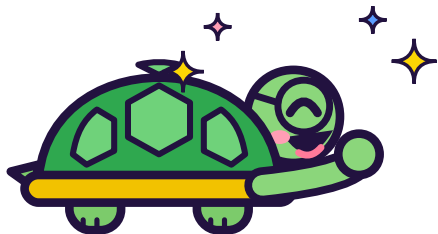


☹☹☹ SPICY

For the same data, work out the total by adding the three labels instead. What do you get, and why is it different?

#5 on your practice sheet

How's it going?



3 • Got it!

I could teach it



2 • Almost

One more example, please



1 • Not yet

I need some help



MATH WITH MR DJ

NOW YOU!

Practice sheet: everyone does Mild & Medium, then climb the peppers.

Stuck? Look back at Mr DJ's example at the top of the sheet.

Need it again? Step-by-step videos on YouTube @MathWithMrDJ

Brain break: 3 new daily puzzles at puzzles.mathwithmrdj.com

