

RECALL

Can you simplify these fractions 😊

$$\frac{268}{64}$$

$$64$$

$$\frac{3352}{384}$$

$$384$$

L.O. COMPARE AND ORDER FRACTIONS, INCLUDING FRACTIONS > 1

- **SOME WILL EVEN:** Use number lines to solve problems involving comparing fractions.
- **SOME WILL:** Draw a number line to compare fractions with different denominators.
- **MOST WILL:** Draw a number line to compare fractions with same denominator.
- **ALL WILL:** Complete number lines with missing fractions.

GUIDED PRACTICE-MY TURN



a) The ceiling in Max's side of the room drips

$\frac{1}{4}$ of a litre of water every hour.

Max has already collected half a litre of water in his jug.

How many litres will be in the jug after another 4 hours?

b) Max collects $5\frac{3}{4}$ litres of water in total.

His dad collects $5\frac{4}{5}$ litres of water in total.

Use a number line to show who collected the most water.

help

Use number line or bar modelling to help you.



Can you write dad and Max's fractions as fractions with the same denominator?

GUIDED PRACTICE-OUR TURN



a) The ceiling in Max's side of the room drips

$\frac{1}{4}$ of a litre of water every hour.

Max has already collected half a litre of water in his jug.

How many litres will be in the jug after another 4 hours?

b) Max collects $5\frac{3}{4}$ litres of water in total.

His dad collects $5\frac{4}{5}$ litres of water in total.

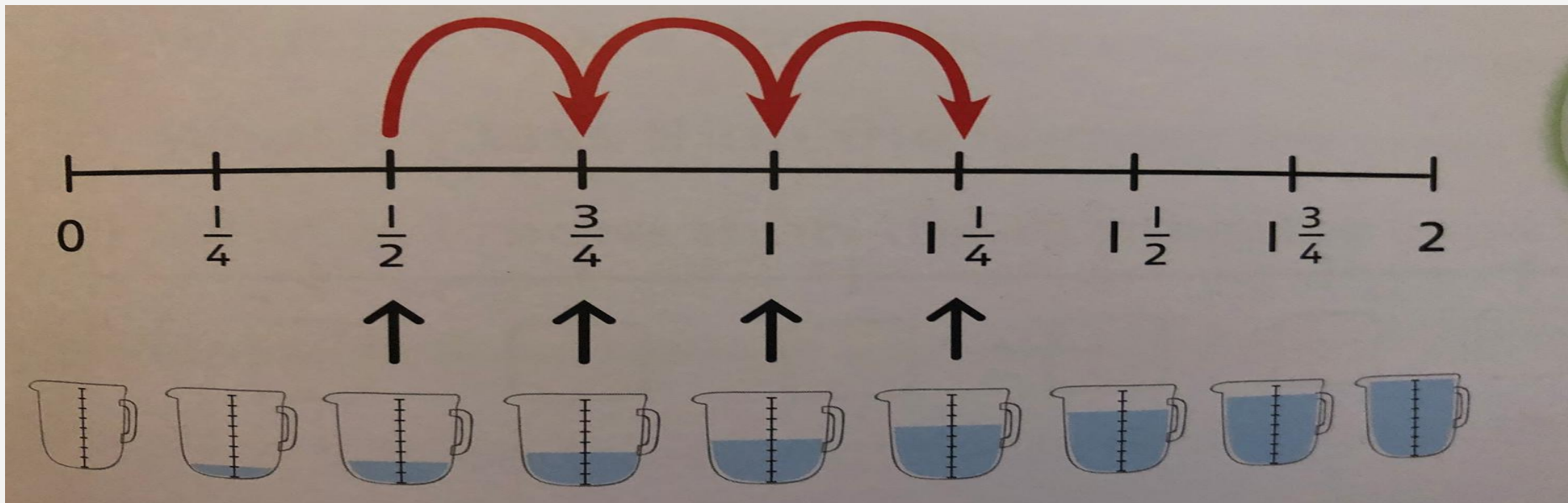
Use a number line to show who collected the most water.

help

Use number line or bar modelling to help you.

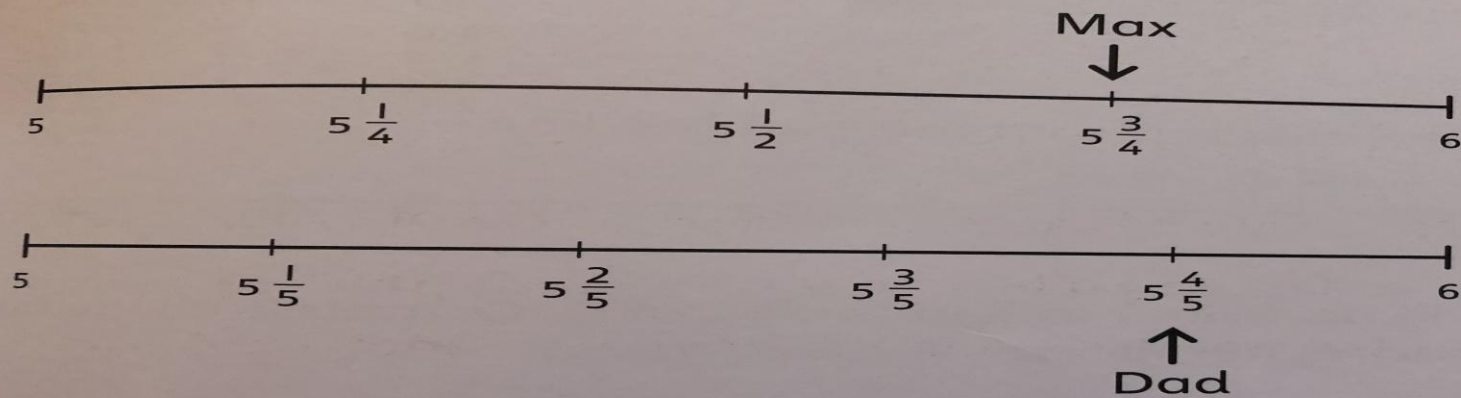


Can you write dad and Max's fractions as fractions with the same denominator?



b) Both amounts of water lie between 5 and 6.

We can compare number lines divided into quarters and fifths.



I put my number lines together to help me compare.

$5\frac{4}{5}$ is bigger than $5\frac{3}{4}$ so Max's dad collected the most water.



YOUR TURN



a) The ceiling in Max's side of the room drips

$\frac{1}{4}$ of a litre of water every hour.

Max has already collected half a litre of water in his jug.

How many litres will be in the jug after another 3 hours?

b) Max collects $5\frac{1}{4}$ litres of water in total.

His dad collects $5\frac{2}{5}$ litres of water in total.

Use a number line to show who collected the most water.

help

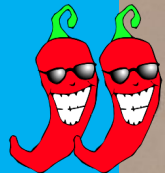
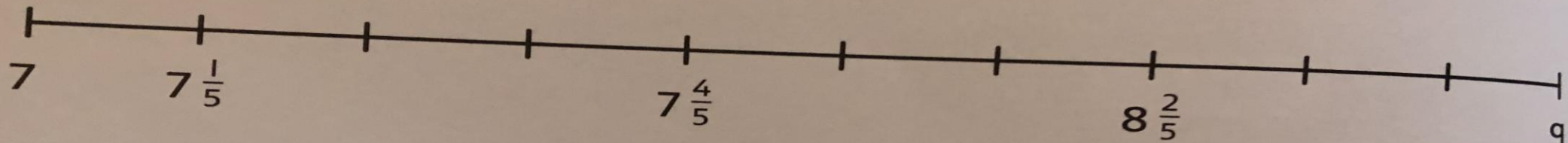
Use number line or bar modelling to help you.



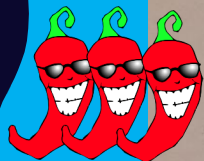
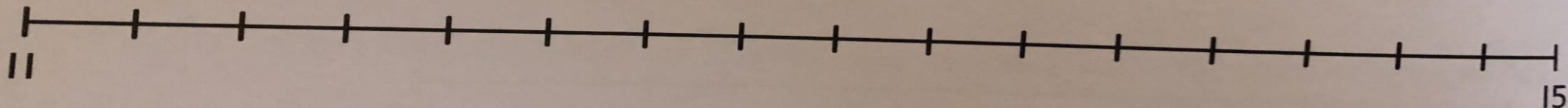
Can you write dad and Max's fractions as fractions with the same denominator?



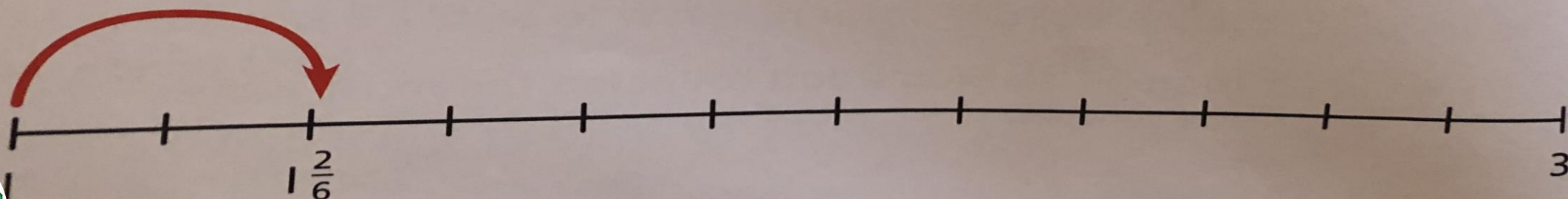
What numbers are missing from the number line?



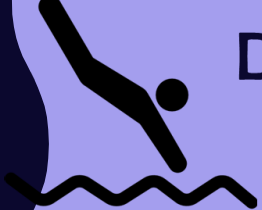
What numbers are missing from the number line?



Danny is counting up from 1 to 3 in jumps of $\frac{2}{6}$. Complete the jumps and fill in the missing numbers.



Draw a number line/ bar model to prove that $\frac{3}{7}$ is bigger than $\frac{2}{6}$



DIVE DEEPER 1

1

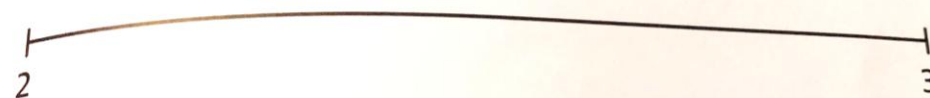


- a) What **number** is the arrow pointing to?
- b) What is $\frac{2}{5}$ **more** than the number the arrow is pointing to?
- c) What is $\frac{1}{5}$ **less** than the number the arrow is pointing to?
- d) What is 1 more than the number the arrow is pointing to?

2

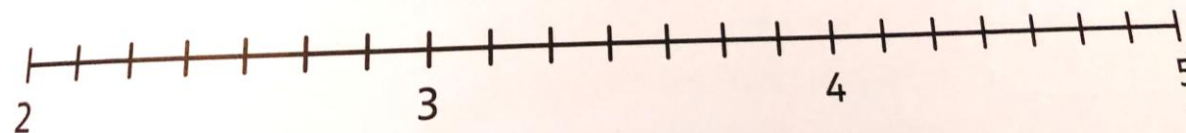
- a) Find where these numbers should go on the number line.

$$2\frac{3}{10} \quad 2\frac{1}{2} \quad 2\frac{9}{10}$$



- b) This **sequence** goes up by the same amount each time. Use the **number line** to help you work out the missing fractions.

, $3\frac{1}{7}$, , , $4\frac{3}{7}$,



CHALLENGE

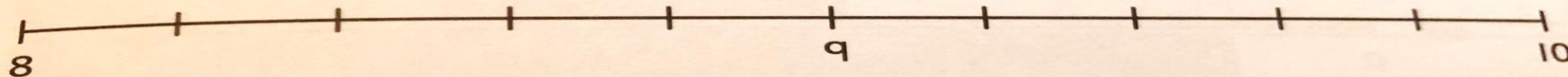
3

Draw an arrow from each fraction to show its position on the number line.

a) $8\frac{2}{5}$

$9\frac{1}{5}$

$9\frac{1}{2}$

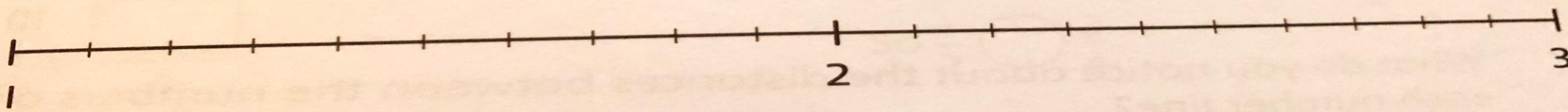


b) $\frac{17}{10}$

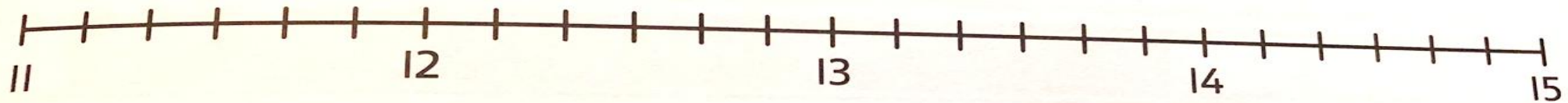
$1\frac{1}{5}$

$2\frac{9}{10}$

$\frac{30}{20}$

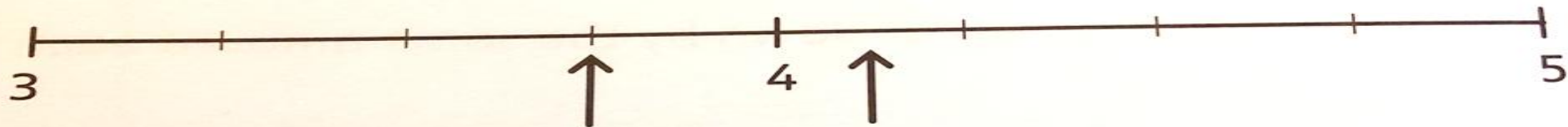


- 4 Use the number line to help you complete the patterns.



- a) , $13\frac{1}{6}$, $13\frac{4}{6}$, ,
- b) $11\frac{1}{2}$, $11\frac{5}{6}$, ,
- c) , , $12\frac{5}{6}$, $12\frac{1}{6}$,
- d) , $13\frac{1}{6}$, , $11\frac{1}{6}$

What numbers are the arrows pointing to? How do you know?



DIVE DEEPER 1

1



- What number is the arrow pointing to? $5\frac{4}{5}$
- What is $\frac{2}{5}$ more than the number the arrow is pointing to? $6\frac{1}{5}$
- What is $\frac{1}{5}$ less than the number the arrow is pointing to? $5\frac{3}{5}$
- What is 1 more than the number the arrow is pointing to? $6\frac{4}{5}$

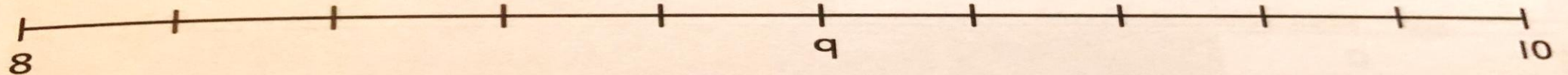
3

Draw an arrow from each fraction to show its position on the number line.

a) $8\frac{2}{5}$

$9\frac{1}{5}$

$9\frac{1}{2}$

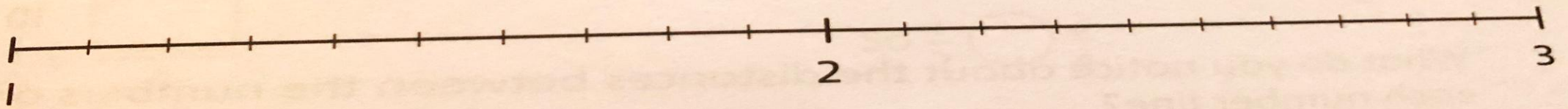


b) $\frac{17}{10}$

$1\frac{1}{5}$

$2\frac{9}{10}$

$\frac{30}{20}$



2

a) Find where these numbers should go on the number line.

$2\frac{3}{10}$

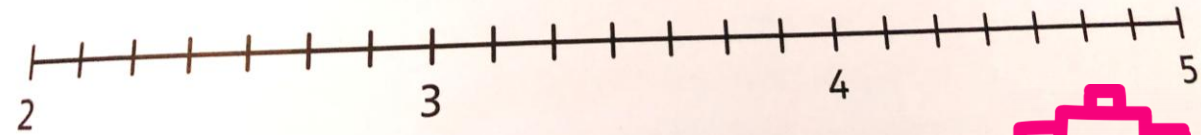
$2\frac{1}{2}$

$2\frac{9}{10}$



b) This sequence goes up by the same amount each time. Use the number line to help you work out the missing fractions.

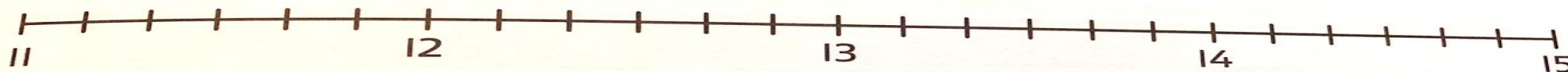
$2\frac{5}{7}$, $3\frac{1}{7}$, $3\frac{4}{7}$, 4 , $4\frac{3}{7}$, $4\frac{6}{7}$



CHALLENGE



4 Use the number line to help you complete the patterns.



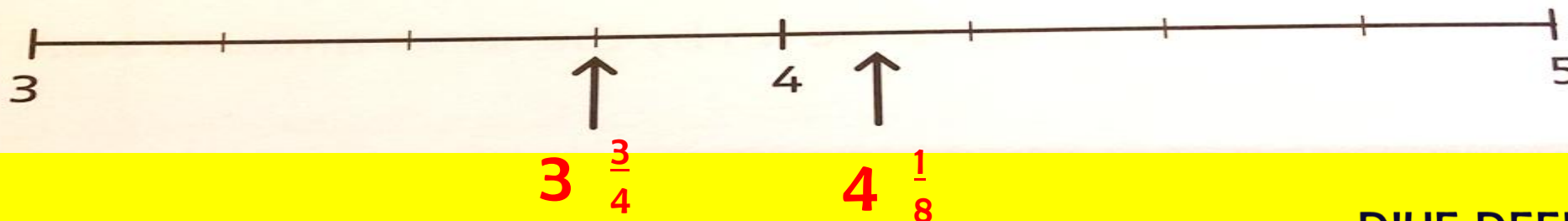
a) $12\frac{4}{6}$, $13\frac{1}{6}$, $13\frac{4}{6}$, $14\frac{1}{6}$, $14\frac{4}{6}$ c) $14\frac{1}{6}$, $13\frac{1}{2}$, $12\frac{5}{6}$, $12\frac{1}{6}$, $11\frac{1}{2}$

b) $11\frac{1}{2}$, $11\frac{5}{6}$, $12\frac{1}{6}$, $12\frac{1}{2}$

d) $14\frac{1}{6}$, $13\frac{1}{6}$, $12\frac{1}{6}$, $11\frac{1}{6}$



What numbers are the arrows pointing to? How do you know?



DIVE DEEPER 2

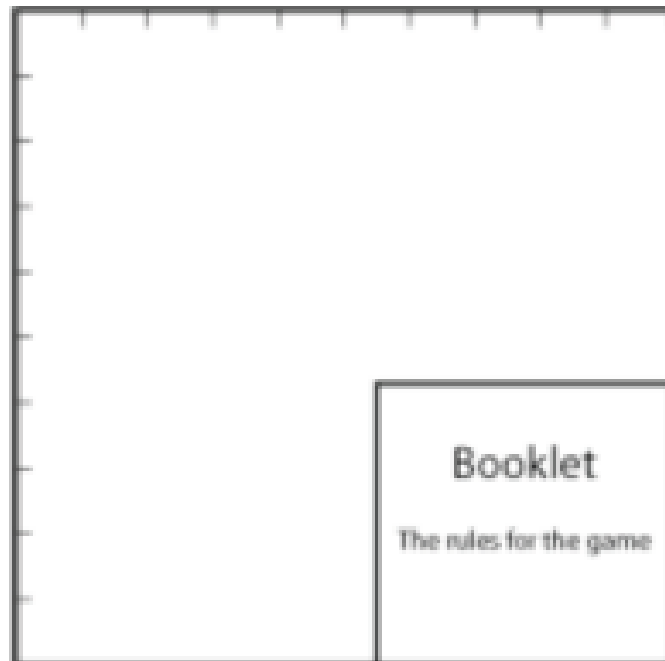


CHALLENGE



Fractions in a Box

We have a game which has a number of discs in 7 different colours. These are kept in a flat square box with a square hole for each disc. There are 10 holes in each row and 10 in each column. So, there would be 100 discs altogether, except that there is a square booklet which is kept in a corner of the box in place of some of the holes. We haven't drawn a grid to show all the holes because that would give the answer away!



There is a different number of discs of each of the 7 colours.

Half ($\frac{1}{2}$) of the discs are red, a quarter ($\frac{1}{4}$) are black and one twelfth ($\frac{1}{12}$) are blue.

One complete row (of 10 holes) of the box is filled with all the blue and green discs. One of the shortened rows (that is where the booklet is) is exactly filled with all the orange discs.

Two of the shortened rows are filled with some of the red discs and the rest of the red discs exactly fill a number of complete rows (of 10) in the box. There is just one white disc and all the rest are yellow.

How many discs are there altogether?

What fraction of them are orange?

What fraction are green? Yellow? White?