RECALL

Convert these decimals to fractions

0.3 =

0.5 =

0.06 =

0.004 =

0.105 =

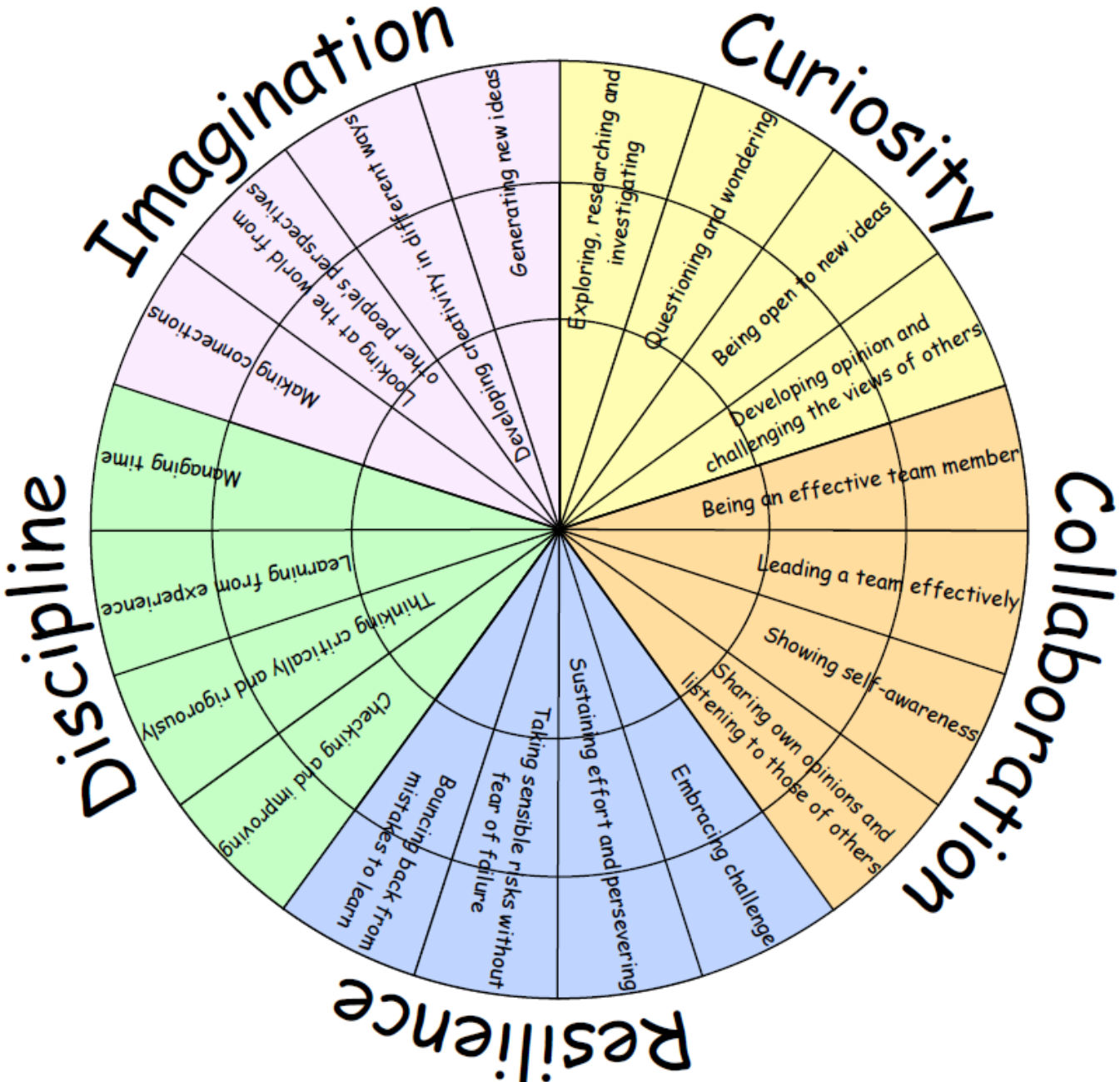
0.167 =

1.234 =

I CAN ASSOCIATE A FRACTION WITH DIVISION AND CALCULATE DECIMAL EQUIVALENTS

Decimals (14vi)

LEARNING HABITS?

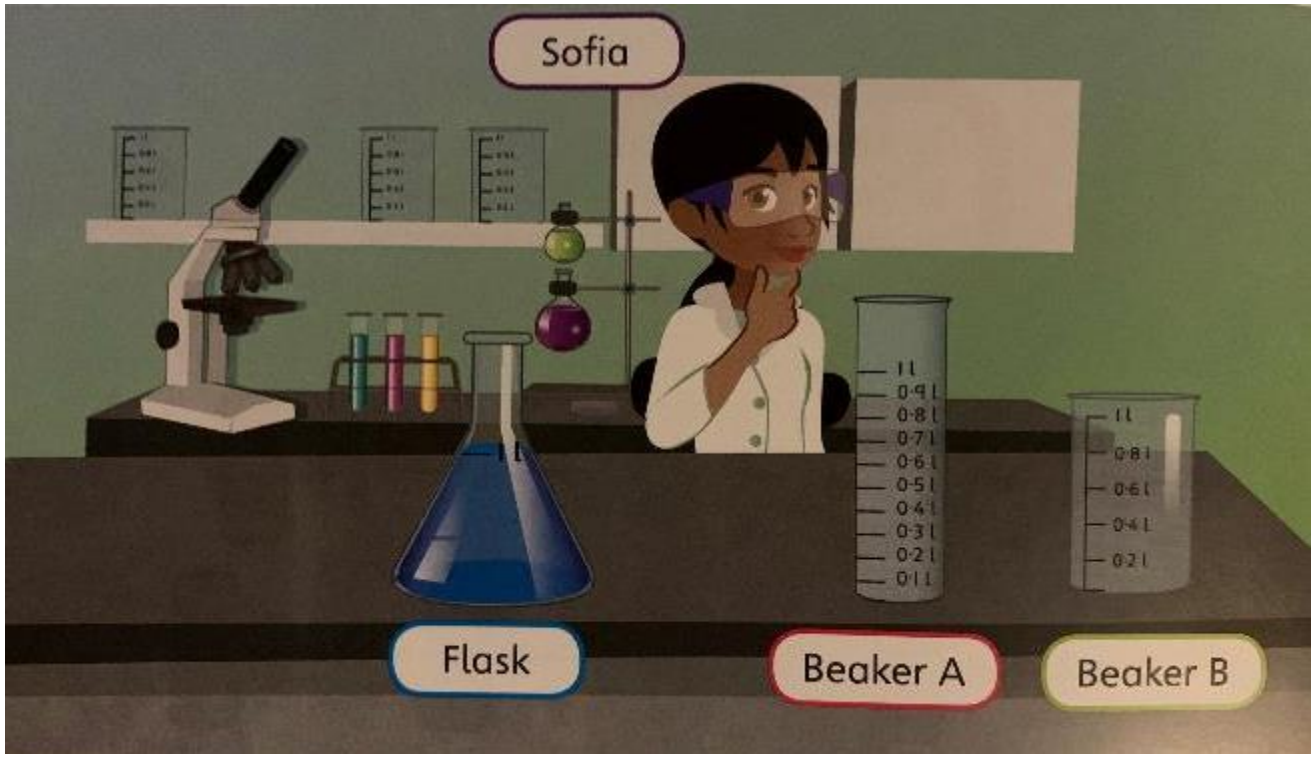


GUIDED PRACTICE

Sofia pours $\frac{1}{10}$ of a litre of liquid from the flask into beaker A.
She then pours $\frac{3}{5}$ of a litre of the liquid into beaker B.

1) If Sofia reads the scale of each beaker, what measurement will she record?

2) How much liquid is left in the flask?



Write a set of instructions how to convert fractions to decimals

INTELLIGENT PRACTICE

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

$\frac{2}{10} =$

$\frac{3}{10} =$

$\frac{6}{10} =$

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

$\frac{2}{100} =$

$\frac{3}{100} =$

$\frac{55}{100} =$

$\frac{1}{1000} = 0.001$

$\frac{8}{1000} =$

$\frac{35}{1000} =$

$\frac{525}{1000} =$

$\frac{1}{50} =$

$\frac{15}{500} =$

$\frac{17}{25} =$

$\frac{29}{250} =$

$\frac{13}{20} =$

$\frac{125}{200} =$

INTELLIGENT PRACTICE

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

$\frac{2}{10} = 0.2$

$\frac{3}{10} = 0.3$

$\frac{6}{10} = 0.6$

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

$\frac{2}{100} = 0.02$

$\frac{3}{100} = 0.03$

$\frac{55}{100} = 0.55$

$\frac{1}{1000} = 0.001$

$\frac{8}{1000} = 0.008$

$\frac{35}{1000} = 0.035$

$\frac{525}{1000} = 0.525$

$\frac{1}{50} = 0.02$

$\frac{15}{500} = 0.030$

$\frac{17}{25} = 0.68$

$\frac{29}{250} = 0.116$

$\frac{13}{20} = 0.65$

$\frac{125}{200} = 0.625$

DIVE DEEPER 1

1) What will 355/1000 kg look like on the display of the balance?

$\frac{355}{1000}$		
$\frac{\quad}{10}$	$\frac{\quad}{100}$	$\frac{\quad}{1000}$

The display will show __ . __ __ __ kg.

2) Write each fraction on a place value chart.

a) $\frac{3}{100}$

b) $\frac{34}{100}$

c) $\frac{3}{1000}$

d) $\frac{345}{1000}$

3a) Which decimal is equivalent to $\frac{77}{10}$?

0.77 77.10 7.7 77.7

b) Which decimal is equivalent to $\frac{370}{100}$?

0.37 0.037 0.307 3.7

DIVE DEEPER 1

1) What will 355/1000 kg look like on the display of the balance?

$\frac{355}{1000}$		
$\frac{3}{10}$	$\frac{5}{100}$	$\frac{5}{1000}$

The display will show 0 . 355kg.

2) Write each fraction on a place value chart.

a) $\frac{3}{100}$ = 0.03

b) $\frac{34}{100}$ = 0.34

c) $\frac{3}{1000}$ = 0.003

d) $\frac{345}{1000}$ = 0.345

3a) Which decimal is equivalent to $\frac{77}{10}$?

0.77 77.10 7.7 77.7

b) Which decimal is equivalent to $\frac{370}{100}$?

0.37 0.037 0.307 3.7

DIVE DEEPER 2

4) Use equivalent fractions to convert these fractions to decimals.

a) $\frac{1}{50} = \frac{\quad}{100} = 0.\_\_\_$

b) $\frac{3}{20} = \frac{\quad}{1000} = \_\_\_\_$

c) $\frac{99}{250} = \frac{\quad}{\quad} = \_\_\_\_$

d) $\frac{3}{50} = \frac{\quad}{100} = \_\_\_\_$

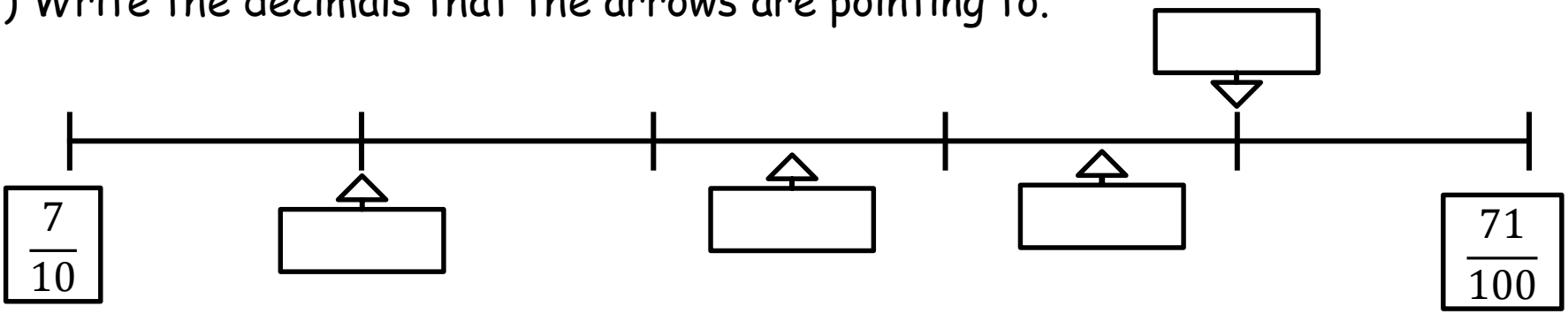
e) $\frac{99}{500} = \frac{\quad}{\quad} = \_\_\_\_$

5) Convert these fractions to decimals and arrange them from smallest to largest.

$\frac{9}{10}$ $\frac{9}{20}$ $\frac{19}{10}$ $\frac{109}{100}$ $\frac{9}{50}$

$\frac{9}{25}$ $\frac{99}{1000}$ $\frac{909}{100}$ $\frac{9}{250}$

6) Write the decimals that the arrows are pointing to.



DIVE DEEPER 2

4) Use equivalent fractions to convert these fractions to decimals.

a) $\frac{1}{50} = \frac{2}{100} = 0.2$

b) $\frac{3}{20} = \frac{15}{1000} = 0.015$

c) $\frac{99}{250} = \frac{396}{1000} = 0.396$

d) $\frac{3}{50} = \frac{6}{100} = 0.06$

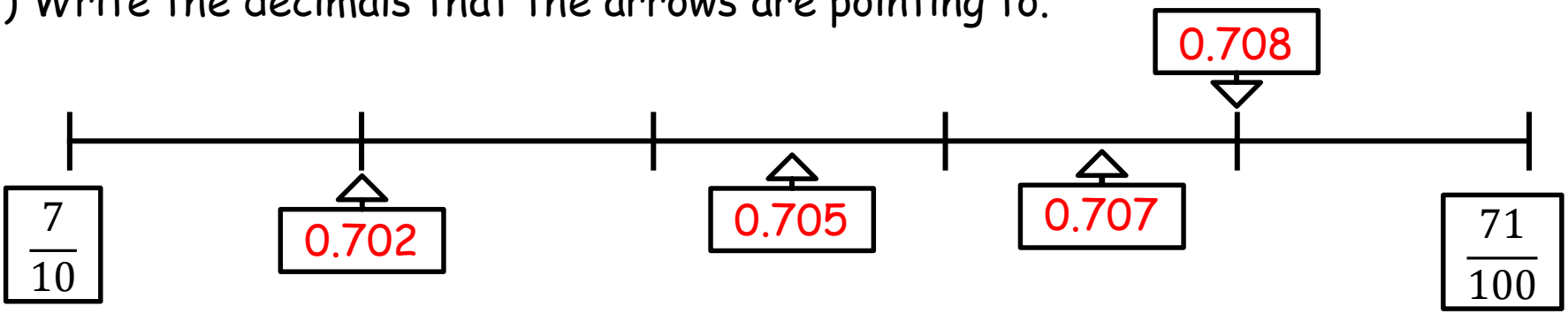
e) $\frac{99}{500} = \frac{198}{1000} = 0.198$

5) Convert these fractions to decimals and arrange them from smallest to largest.

$\frac{9}{10} = 0.9$ $\frac{9}{20} = 0.45$ $\frac{19}{10} = 1.9$ $\frac{109}{100} = 1.09$ $\frac{9}{50} = 0.18$

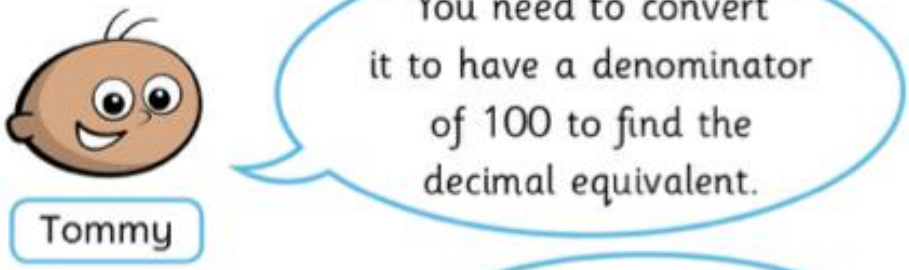
$\frac{9}{25} = 0.36$ $\frac{99}{1000} = 0.099$ $\frac{909}{100} = 9.09$ $\frac{9}{250} = 0.036$

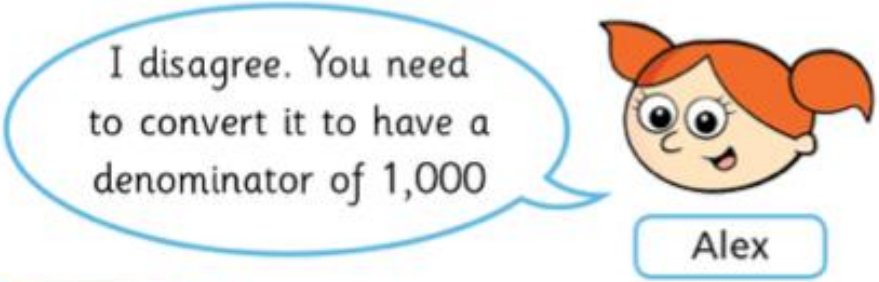
6) Write the decimals that the arrows are pointing to.

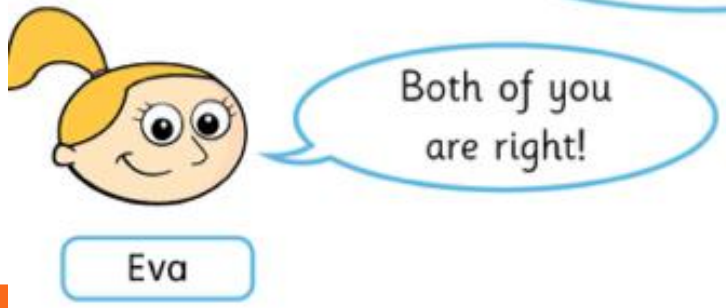


DIVE DEEPER 3

Tommy, Alex and Eva are working out the decimal equivalent of $\frac{60}{200}$







Who do you agree with?

Explain your thinking.

DIVE DEEPER 4

Use these digit cards to make fractions, where one card is the denominator and one card is the numerator.

Convert each fraction to a decimal and write it in the correct column of the table.

2	4	5	25	50	200	250	500

Between 0 and 1	Between 1 and 10	Greater than 10

SELF-ASSESSMENT

- Some will even be able apply their knowledge of fractions to make numbers larger than a whole
- Some will be able to multiply numerators to make them equivalent to 10, 100 or 1000
- Most will be able to explain how to convert tenths, hundredths and thousandths
- All will be able to convert tenths, hundredths and thousandths to decimals