RECALL

Solve these divisions and write your remainders as a decimal

23 ÷ 2 =

13 ÷ 3 =

57 ÷ 6 =

65 ÷ 8 =

79 ÷ 9 =

123 ÷ 12 =

133 ÷ 13 =

597 ÷ 16 =

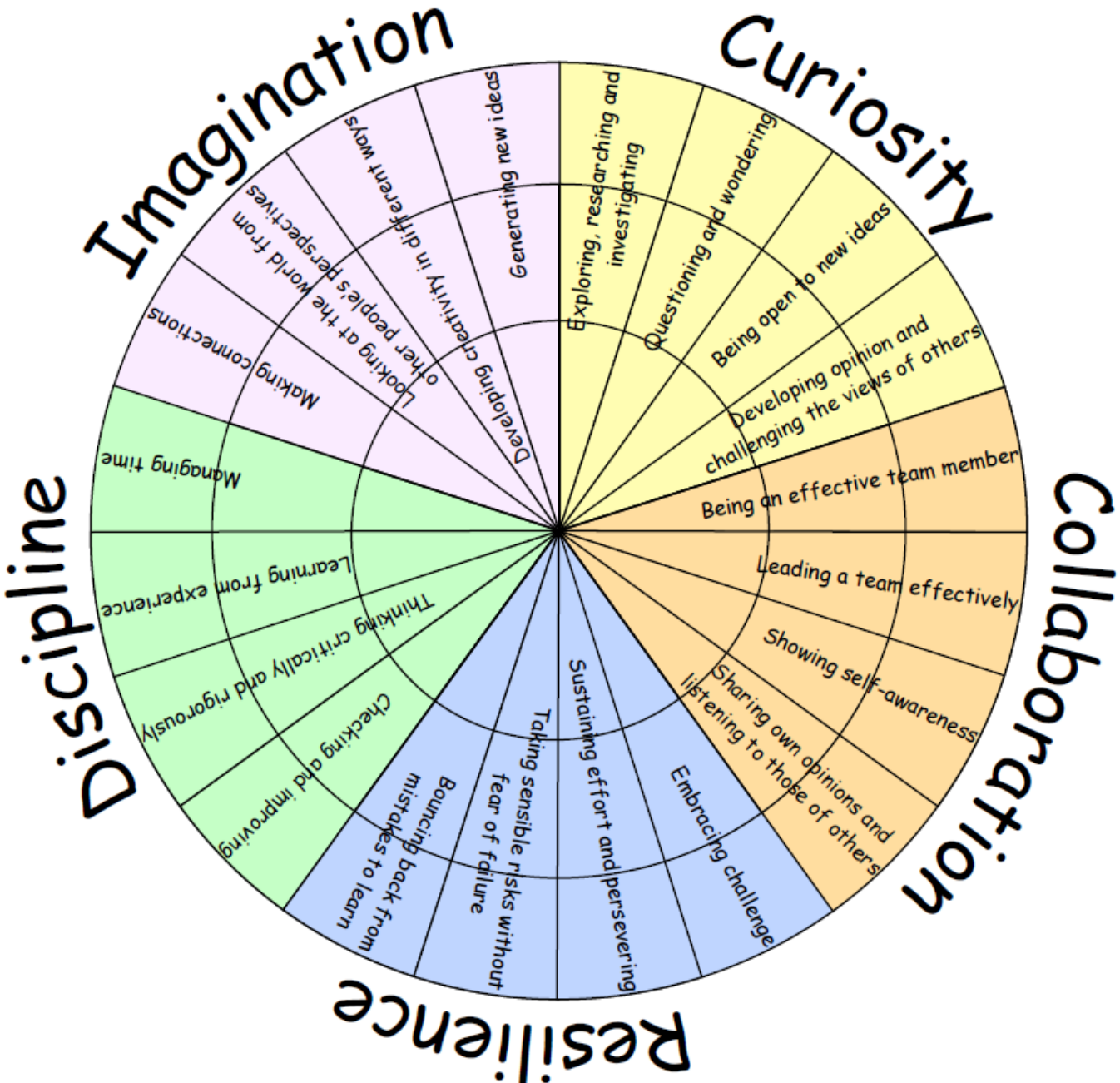
867 ÷ 18 =

729 ÷ 19 =

I CAN ASSOCIATE A FRACTION WITH DIVISION AND CALCULATE DECIMAL EQUIVALENTS

Decimals (14vi)

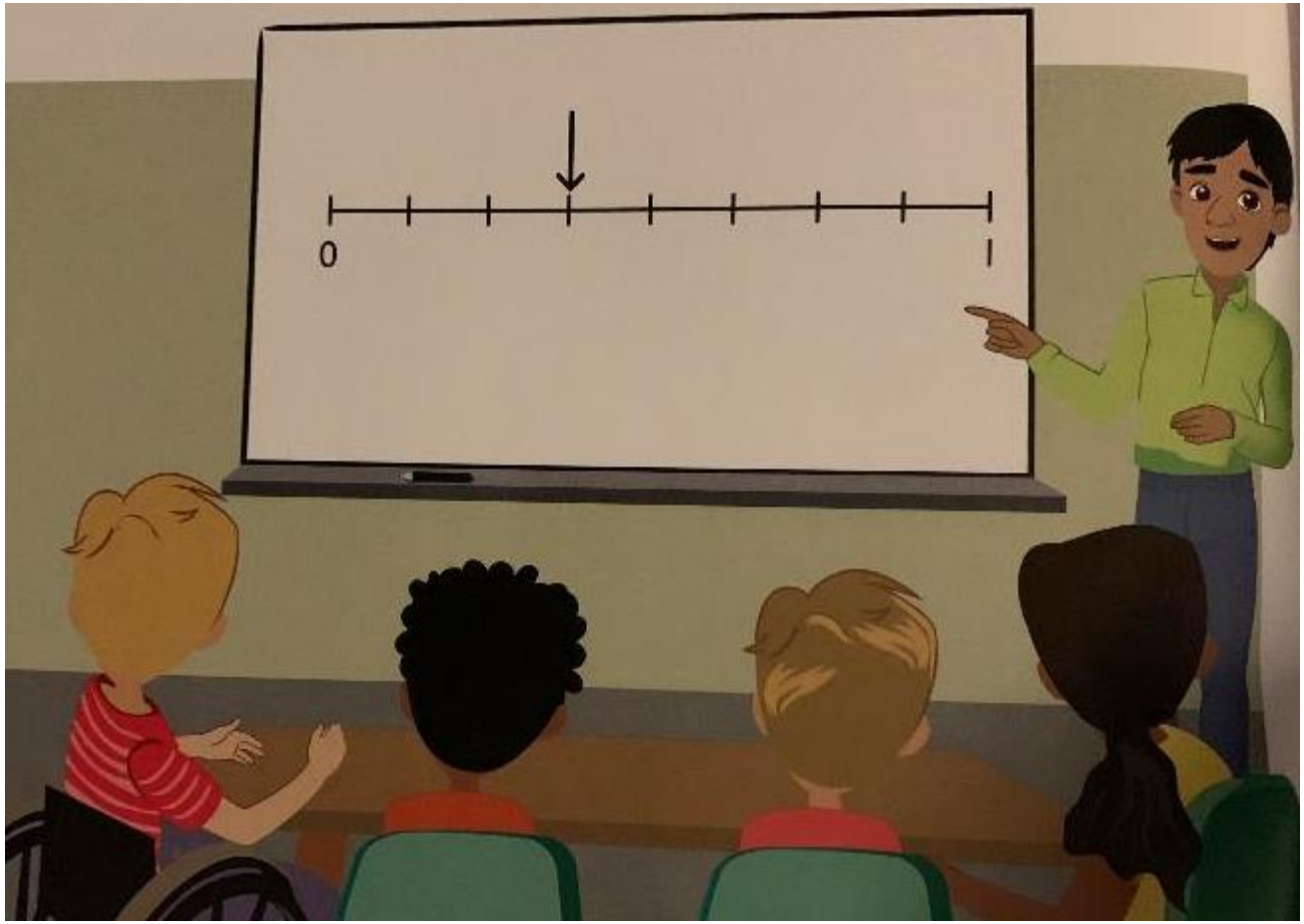
LEARNING HABITS?



GUIDED PRACTICE

1) What decimal number is the arrow pointing to?

2) Label all the decimals on the number line.



Can you write a set of rules about how you did this?

INTELLIGENT PRACTICE

$\frac{1}{2} = 1 \div 2 =$

$\frac{1}{4} = 1 \div 4 =$

$\frac{1}{5} = 1 \div 5 =$

$\frac{1}{8} = 1 \div 8 =$

What do you notice about the size of the decimals?

$\frac{1}{5} =$

$\frac{2}{5} =$

$\frac{3}{5} =$

$\frac{4}{5} =$

What do you notice about the difference between the decimals? Why?

$\frac{1}{3} =$

$\frac{1}{6} =$

$\frac{1}{9} =$

$\frac{1}{12} =$

All these fractions are examples of recurring fractions, what do you think this means?

$\frac{3}{9} =$ $\frac{4}{9} =$ $\frac{5}{9} =$ $\frac{8}{9} =$

$\frac{5}{8} =$ $\frac{3}{7} =$ $\frac{7}{12} =$ $\frac{5}{6} =$

DIVE DEEPER 1

1) Fractions can be expressed as divisions. For example, $\frac{1}{2} = 1 \div 2$
Write these fractions as divisions.

a) $\frac{1}{3}$ = ___ ÷ ___

b) $\frac{2}{3}$ = ___ ÷ ___

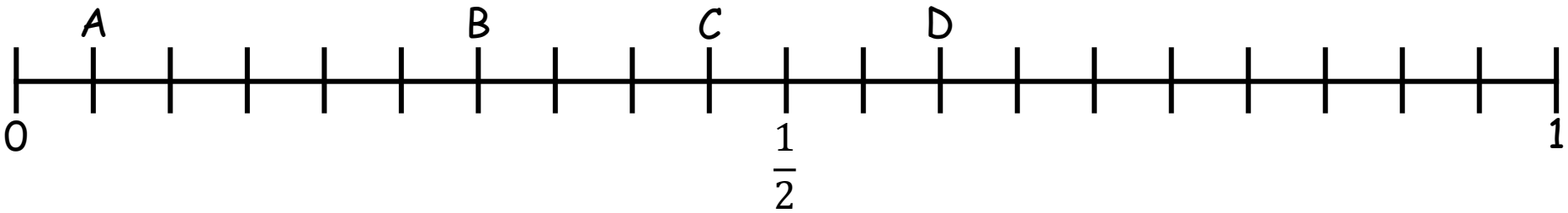
c) $\frac{4}{7}$ = ___ ÷ ___

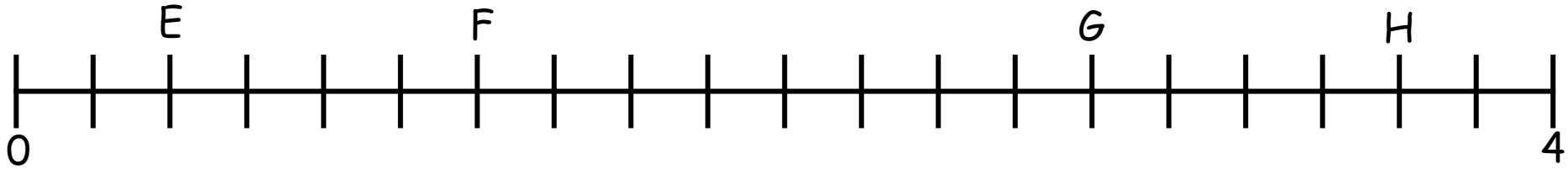
d) — = 3 ÷ 5

e) $\frac{}{7}$ = 3 ÷ ___

f) $\frac{1}{10}$ = ___ ÷ ___

2) Write an equivalent fraction and a decimal for each of the fractions marked on the number line.





DIVE DEEPER 1 ANSWERS

1) Fractions can be expressed as divisions. For example, $\frac{1}{2} = 1 \div 2$
Write these fractions as divisions.

a) $\frac{1}{3} = 1 \div 3$

b) $\frac{2}{3} = 2 \div 3$

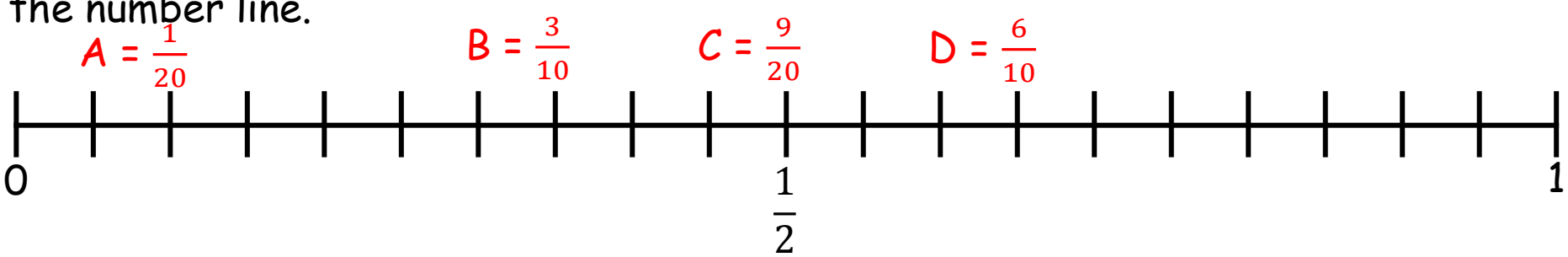
c) $\frac{4}{7} = 4 \div 7$

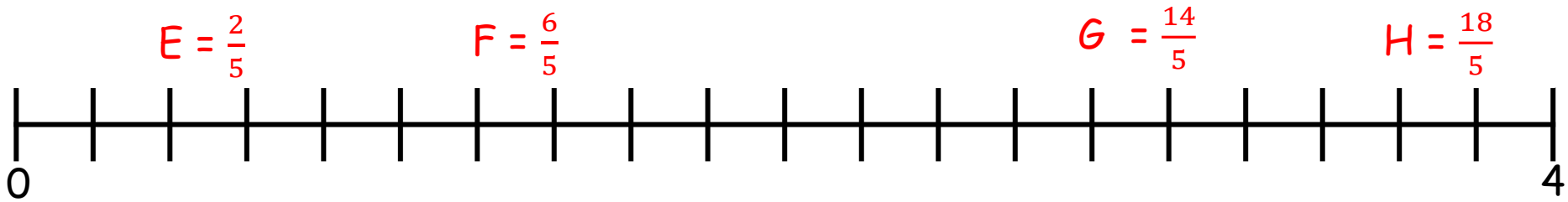
d) $\frac{3}{5} = 3 \div 5$

e) $\frac{3}{7} = 3 \div 7$

f) $\frac{1}{10} = 1 \div 10$

2) Write an equivalent fraction and a decimal for each of the fractions marked on the number line.





DIVE DEEPER 2

3) Write each of these calculations as a fraction and a decimal.

$3 \div 2$ $11 \div 8$ $5 \div 6$ $2 \div 3$

4) Jack says that, ' I converted $\frac{1}{2}$ to a decimal and got the answer 2.'

Jack is incorrect.

Explain the mistake that Jack has made.

5) Dora: To find $\frac{19}{20}$ as a decimal, I found $\frac{1}{20}$ as a decimal, then took it ways from 1.

Use Dora's method to find the decimal equivalent for $\frac{49}{50}$

6) Filip is thinking of a fractions.
When he converts it to a decimal, it is smaller than 0.5 but greater than 0.4.

What fraction could Filip be thinking of?

How many possibilities can you find?

DIVE DEEPER 2 ANSWERS

3) Write each of these calculations as a fraction and a decimal.

$3 \div 2 = \frac{3}{2} = 1.5$ $11 \div 8 = \frac{11}{8} = 1.375$ $5 \div 6 = \frac{5}{6} = 0.833$ $2 \div 3 = \frac{2}{3} = 0.66$

4) Jack says that, ' I converted $\frac{1}{2}$ to a decimal and got the answer 2.'

Jack is incorrect.
Jack is incorrect because he divided 2 by 1 not 1 by 2.

5) Dora: To find $\frac{19}{20}$ as a decimal, I found $\frac{1}{20}$ as a decimal, then took it ways from 1.

Use Dora's method to find the decimal equivalent for $\frac{49}{50}$

$\frac{1}{50} = 0.02$ $1 - 0.02 = 0.98$ $\frac{49}{20} = 0.98$

6) Filip is thinking of a fraction.
When he converts it to a decimal, it is smaller than 0.5 but greater than 0.4.

What fraction could Filip be thinking of? $\frac{2}{5} > \frac{1}{2}$

How many possibilities can you find?

SELF-ASSESSMENT

- Some will even be able to reason about the magnitude of fractions and decimals equivalence
- Some will be able to spot patterns within decimal and fraction equivalences
- Most will be able to use division to covert fractions to decimals
- All will be able to recall decimal equivalence for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$