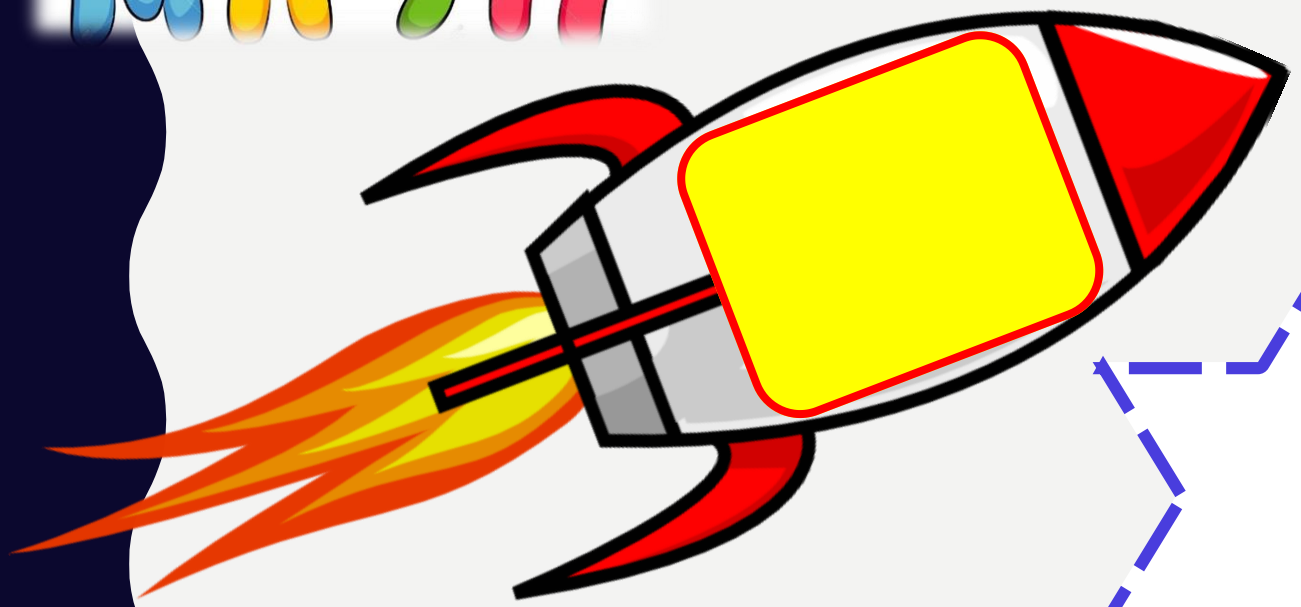
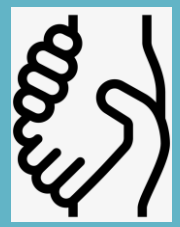
Mathematician of the day!



NAILED IT!
✓

Presentation watch...

Silky's Circle



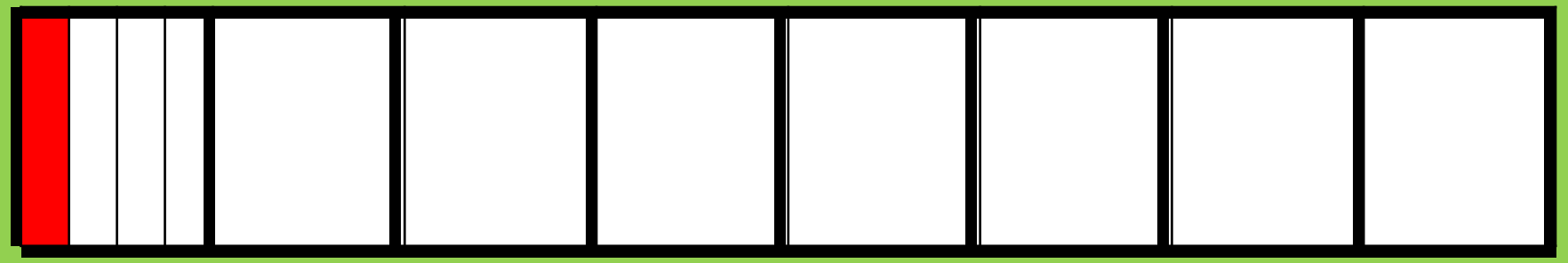
Non-negotiables

The KC SPOTLIGHT

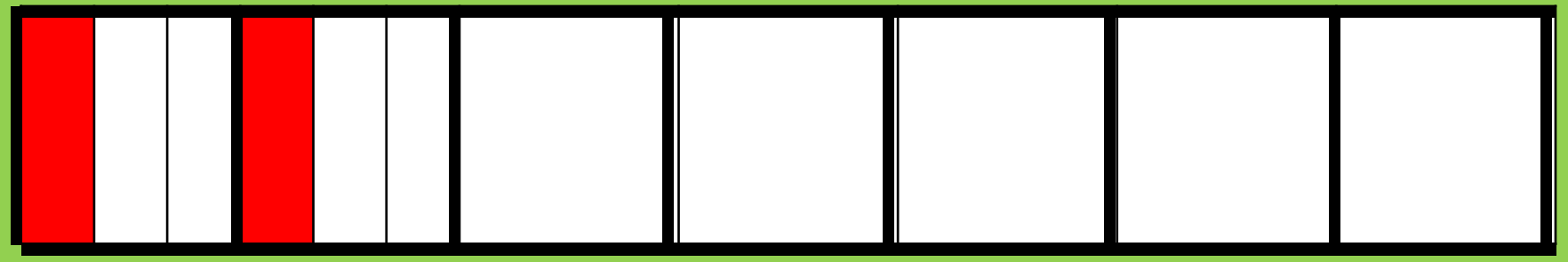
RECALL

What calculation could these diagrams show?

a)



b)



$\frac{1}{8} \div 4$

K $\frac{1}{8} \div \frac{4}{1}$

F $\frac{1}{8} \div \frac{1}{4}$

C $\frac{1}{8} \times \frac{1}{4} = \frac{1}{32}$

$\frac{2}{7} \div 3 =$

K $\frac{2}{7} \div \frac{3}{1} =$

F $\frac{2}{7} \div \frac{1}{3}$

C $\frac{2}{7} \times \frac{1}{3} = \frac{2}{21}$

L.O. - TO DIVIDE PROPER FRACTIONS BY WHOLE NUMBERS

- SOME WILL EVEN: Be able to notice patterns between dividing and multiplying by fractions
- SOME WILL: Begin to create their own rule for dividing fractions by integers
- MOST WILL: Be able to spot a pattern between the diagrams and calculations
- ALL WILL: Be able to draw bars to represent dividing fractions by integers

GUIDED PRACTICE – MY TURN

1. The jug is 4/5 full of juice.

The juice is divided equally between the 2 empty cups. What fraction of the original jug is in each of these cups?

2. Nine tenths of the jar of baby food will be enough for 3 equal meals.

What fraction of the jar of baby food should be put into each bowl?

help

Draw diagrams to help you.

There are 25 out of 30 biscuits left.
How many different ways could the biscuits be shared between the babies and mum? (HINT: doesn't have to be equal share to mum!)

GUIDED PRACTICE – YOUR TURN

1. The jug is 3/5 full of juice.

The juice is divided equally between the 2 empty cups. What fraction of the original jug is in each of these cups?

2. Eight tenths of the jar of baby food will be enough for 3 equal meals.

What fraction of the jar of baby food should be put into each bowl?

help

Draw diagrams to help you.

There are 27 out of 30 biscuits left.
How many different ways could the biscuits be shared between the babies and mum? (HINT: doesn't have to be equal share to mum!)

Intelligent Practice

1. $\frac{2}{9} \div 2 =$

2. $\frac{6}{9} \div 6 =$

3. $\frac{\quad}{\quad} = \frac{3}{10} \div 3$

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

2. $\frac{1}{10} \div \frac{\quad}{\quad} = \frac{1}{30}$

3. $\frac{1}{3} \div \frac{\quad}{\quad} = \frac{1}{9}$

1. $\frac{6}{\quad} \div 3 = \frac{6}{30}$

2. $\frac{12}{60} = \frac{12}{\quad} \div 4$

3. $\frac{8}{\quad} \div 4 = \frac{8}{36}$

$\frac{\square}{18} \div 3 = \frac{2}{9}$

$\frac{\square}{60} \div 4 = \frac{7}{30}$

$\frac{\square}{24} \div 2 = \frac{3}{8}$

Intelligent Practice

1. $\frac{2}{9} \div 2 = \frac{2}{18} = \frac{1}{9}$

2. $\frac{6}{9} \div 6 = \frac{6}{54} = \frac{1}{9}$

3. $\frac{3}{30} = \frac{3}{10} \div 3$

$\frac{1}{10}$

$\frac{1}{4}$

1. $\frac{3}{12} = \frac{1}{4} \div \frac{3}{\quad}$

2. $\frac{1}{10} \div \frac{3}{\quad} = \frac{1}{30}$

3. $\frac{1}{3} \div \frac{3}{\quad} = \frac{1}{9}$

1. $\frac{6}{10} \div 3 = \frac{6}{30}$

2. $\frac{12}{60} = \frac{12}{15} \div 4$

3. $\frac{8}{9} \div 4 = \frac{8}{36}$

$\frac{12}{18} \div 3 = \frac{2}{9}$ $\frac{12}{54}$

$\frac{56}{60} \div 4 = \frac{7}{30}$ $\frac{56}{240}$

$\frac{18}{24} \div 2 = \frac{3}{8}$ $\frac{18}{48}$

DIVE DEEPER 1

1. Kate share $\frac{2}{3}$ of a pizza equally between her and her two friends.

What fraction of the whole pizza does each person get?

2. Emma has a chocolate bar. She eats $\frac{2}{6}$ of the bar.

She shares the remainder equally with Max.

What fraction of the whole bar does Max get?

3. A snail travels $\frac{12}{15}$ km in 3 days. It travels the same distance each day.

What fraction of a km does the snail travel each day?

4. Mo works out $\frac{10}{25} \div 5$

He says that the answer is $\frac{2}{5}$.

What mistake has he made?

5. Write < > or = to complete each statement

a) $\frac{1}{3} \div 5 \bigcirc \frac{1}{5} \div 3$

b) $\frac{1}{3} \div 3 \bigcirc \frac{1}{5} \div 5$

c) $\frac{3}{5} \div 5 \bigcirc \frac{3}{5} \div 3$

6. Find six different ways to make the calculation correct.

$$\frac{1}{\square} \div \square = \frac{1}{48}$$

DIVE DEEPER 2

1)

Complete these calculations

a) $\frac{4}{10} \div 2 = \frac{\square}{10} = \frac{\square}{5}$

b) $\frac{10}{15} \div 2 = \frac{\square}{15} = \square$

c) $\frac{20}{45} \div 4 = \square = \square$

d) $\frac{18}{45} \div 2 = \square = \square$

e) $\frac{24}{56} \div 3 = \square = \square$

f) $\square = \square = \frac{21}{56} \div 3$

2)

Which of these statements are true? Tick your answers.

$\frac{1}{2} \div 2$ *is equal to* $\frac{1}{2} \times \frac{1}{2}$ ☐

$\frac{1}{2} \div 4 = \frac{1}{2} \times \frac{1}{4}$ ☐

$\frac{1}{2} \div 3 = \frac{1}{2} \times \frac{1}{3}$ ☐

$\frac{1}{2} \div 5 = \frac{1}{2} \times \frac{1}{5}$ ☐

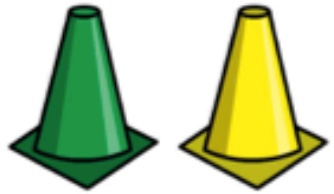
b) What do you notice?

Is it only true for halves?

Does it work for non-unit fractions?

There are some cones in the PE shed.

Classes 1, 2 and 3 share them equally.



- Class 1 put theirs into 4 equal piles.
- Class 2 put theirs into 5 equal piles.
- Class 3 put theirs into 11 equal piles.

What fraction of the whole number of cones is in each pile?

	Fraction in each pile
Class 1	
Class 2	
Class 3	

3)

1. Kate share $\frac{2}{3}$ of a pizza equally between her and her two friends.

What fraction of the whole pizza does each person get? $\frac{2}{3} \div 2 = \frac{2}{6} = \frac{1}{3}$

2. Emma has a chocolate bar. She eats $\frac{2}{6}$ of the bar.

She shares the remainder equally with Max.

What fraction of the whole bar does Max get?
$\frac{2}{6} \div 2 = \frac{2}{12} = \frac{1}{6}$

3. A snail travels $\frac{12}{15}$ km in 3 days. It travels the same distance each day.

What fraction of a km does the snail travel each day? $\frac{12}{15} \div 3 = \frac{12}{45} = \frac{4}{15}$

4. Mo works out $\frac{10}{25} \div 5$

He says that the answer is $\frac{2}{5}$.

What mistake has he made? Mo has divided both the numerator and denominator by 5, which has found an equivalent fraction.

5. Write < > or = to complete each statement

a) $\frac{1}{3} \div 5$ **=** $\frac{1}{5} \div 3$

b) $\frac{1}{3} \div 3$ **>** $\frac{1}{5} \div 5$

c) $\frac{3}{5} \div 5$ **<** $\frac{3}{5} \div 3$

6. Find six different ways to make the calculation correct.

$\frac{1}{24} \div \boxed{2} = \frac{1}{48}$

$\frac{1}{12} \div \boxed{4} = \frac{1}{48}$

$\frac{1}{6} \div \boxed{8} = \frac{1}{48}$

$\frac{1}{4} \div \boxed{12} = \frac{1}{48}$

$\frac{1}{3} \div \boxed{16} = \frac{1}{48}$

$\frac{1}{2} \div \boxed{24} = \frac{1}{48}$

DIVE DEEPER 2

1)

Complete these calculations

a) $\frac{4}{10} \div 2 = \frac{4}{10} = \frac{2}{5}$

b) $\frac{10}{15} \div 2 = \frac{5}{15} = \frac{1}{3}$

c) $\frac{20}{45} \div 4 = \frac{20}{90} = \frac{2}{9}$

d) $\frac{18}{45} \div 2 = \frac{18}{90} = \frac{2}{10} = \frac{1}{5}$

e) $\frac{24}{56} \div 3 = \frac{24}{168} = \frac{1}{7}$

f) $\frac{1}{8} = \frac{21}{168} = \frac{21}{56} \div 3$

2)

Which of these statements are true? Tick your answers.

$\frac{1}{2} \div 2$ *is equal to* $\frac{1}{2} \times \frac{1}{2}$ ✓

$\frac{1}{2} \div 4 = \frac{1}{2} \times \frac{1}{4}$ ✓

$\frac{1}{2} \div 3 = \frac{1}{2} \times \frac{1}{3}$ ✓

$\frac{1}{2} \div 5 = \frac{1}{2} \times \frac{1}{5}$ ✓

b) What do you notice?

Is it only true for halves?

Does it work for non-unit fractions?

3)

There are some cones in the PE shed.

Classes 1, 2 and 3 share them equally.

- Class 1 put theirs into 4 equal piles.
- Class 2 put theirs into 5 equal piles.
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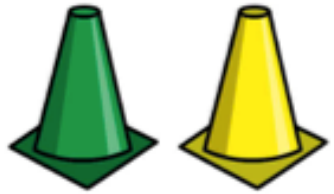

What fraction of the whole number of cones is in each pile?

	Fraction in each pile
Class 1	$\frac{1}{3} \div 4 = \frac{1}{12}$
Class 2	$\frac{1}{3} \div 5 = \frac{1}{15}$
Class 3	$\frac{1}{3} \div 11 = \frac{1}{33}$