

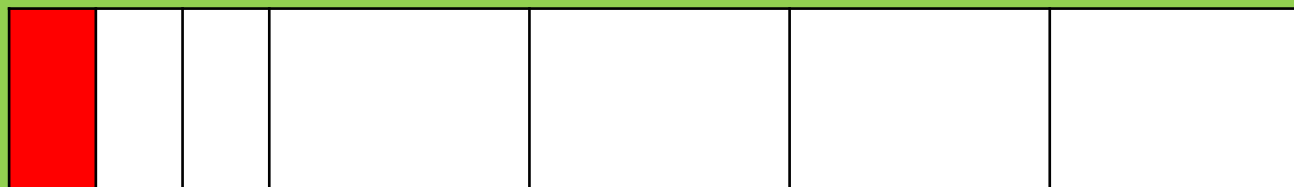
RECALL

What calculation could these diagrams be showing?

a)



b)

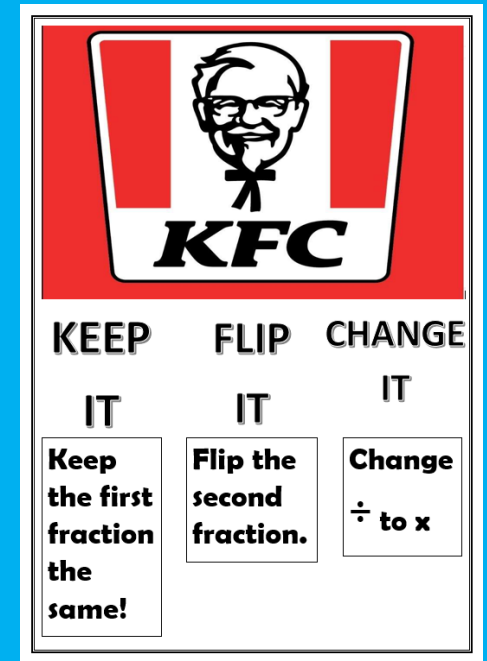


What do you notice?

What's the same and what's different?

L.O. -DIVIDE PROPER FRACTIONS BY WHOLE NUMBERS

- **SOME WILL EVEN:** Notice patterns between dividing and multiplying by fractions
- **SOME WILL:** Use KFC rule for dividing fractions by integers.
- **MOST WILL:** Spot a pattern between the diagrams and calculations
- **ALL WILL:** Draw bars to represent dividing fractions by integers



GUIDED PRACTICE – MY TURN

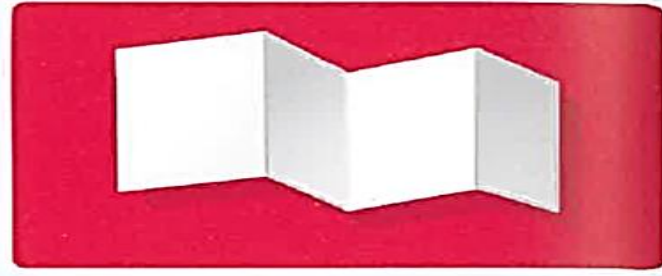
Make a pop-up card



Instructions

For the penguin's body

- Divide a circle into thirds.
- Divide one of the thirds into 2 equal parts.
- Leave one of these 2 parts white and put it at the top. Colour the rest of the circle black.



For the spring

- Fold a paper strip into quarters.
- Divide one of the quarters at the end of the strip into 2.
- Put glue on one of these 2 parts at the end of the strip.

1. What fraction of the penguin's body is white?
2. What fraction of the strip of paper is covered in glue?

help

Draw the instructions using circles or a bar model.



Can you show me a DIFFERENT way to work out the answer?

GUIDED PRACTICE – OUR TURN

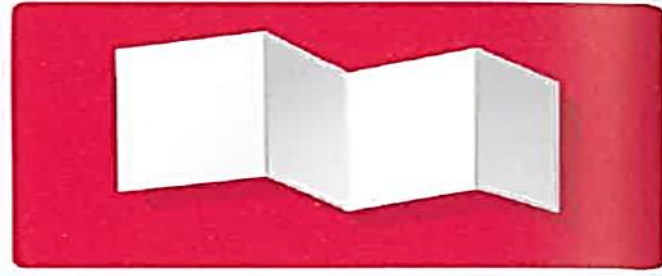
Make a pop-up card



Instructions

For the penguin's body

- Divide a circle into thirds.
- Divide one of the thirds into 2 equal parts.
- Leave one of these 2 parts white and put it at the top. Colour the rest of the circle black.



For the spring

- Fold a paper strip into quarters.
- Divide one of the quarters at the end of the strip into 2.
- Put glue on one of these 2 parts at the end of the strip.

1. What fraction of the penguin's body is white?
2. What fraction of the strip of paper is covered in glue?

help

Draw the instructions using circles or a bar model.



Can you show me a DIFFERENT way to work out the answer?

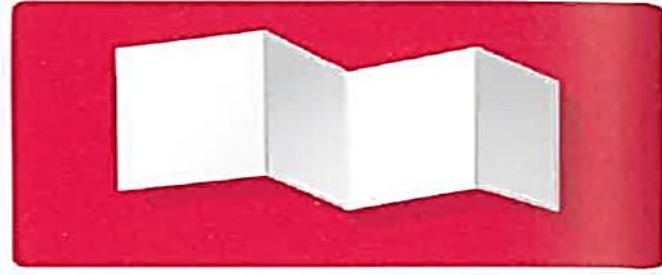
GUIDED PRACTICE – YOUR TURN

Make a pop-up card



Instructions

- Divide a circle into fifths
- Divide one of the fifths into 2 equal parts.
- Leave one of these 2 parts white and put it at the top. Colour the rest in black.



For the spring...

- Fold a paper strip into 3.
- Divide one of the thirds at the end of the strip into 2.
- Put glue on one of these 2 parts at the end of the strip.

1. What fraction of the penguins body is white?

2. What fraction of the strip of paper is covered in glue?

help

Draw the instructions using circles or a bar model.



Can you show me a DIFFERENT way to work out the answer?



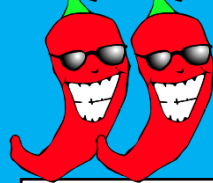
Write the answers in its simplest form

1) $\frac{1}{4} \div 2 =$

2) $\frac{1}{4} \div 3 =$

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

What do you notice?



Write the answers in its simplest form

1) $\frac{1}{5} \div 2 =$

2) $\frac{1}{6} \div 2 =$

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

What do you notice?



Write the answer in its simplest form

1) $\frac{1}{5} \div 4 =$

2) $\frac{1}{6} \div 5 =$

3) $\frac{1}{7} \div 3 =$

What do you notice?



Would you do these calculations in the same way? If not, why not?

1) $\frac{2}{5} \div 2 =$ 2) $\frac{3}{5} \div 3 =$ 3) $\frac{4}{5} \div 4 =$



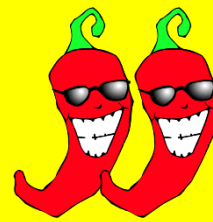
Write the answers in its simplest form

$$1) \frac{1}{4} \div 2 = \frac{1}{8}$$

$$2) \frac{1}{4} \div 3 = \frac{1}{12}$$

$$3) \frac{1}{4} \div 4 = \frac{1}{16}$$

What do you notice?



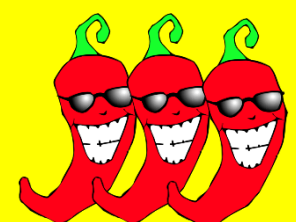
Write the answers in its simplest form

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

$$2) \frac{1}{6} \div 2 = \frac{1}{12}$$

$$3) \frac{1}{7} \div 2 = \frac{1}{14}$$

What do you notice?



Write the answer in its simplest form

$$1) \frac{1}{5} \div 4 = \frac{1}{20}$$

$$2) \frac{1}{6} \div 5 = \frac{1}{30}$$

$$3) \frac{1}{7} \div 3 = \frac{1}{21}$$

What do you notice?



Would you do these calculations in the same way? If not, why not?

$$1) \frac{2}{5} \div 2 = \frac{2}{10} \quad 2) \frac{3}{5} \div 3 = \frac{3}{15} \quad 3) \frac{4}{5} \div 4 = \frac{4}{20}$$



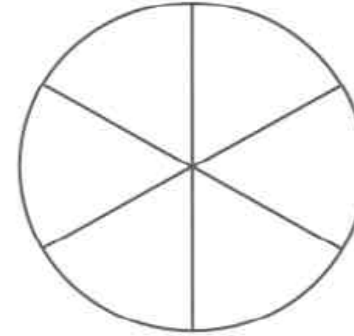
DIVE DEEPER 1

1. A circle is divided into 6 equal parts.

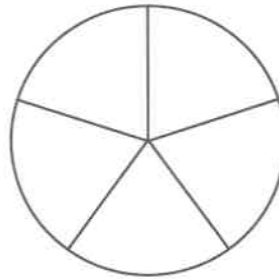
Divide 1 of the sixths into 2 parts.

Shade in 1 of the parts you have just made.

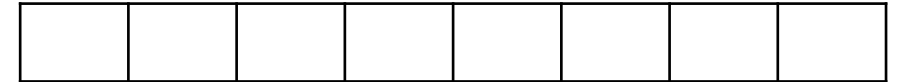
What fraction of the circle is shaded?



2. Use the diagram to work out $\frac{1}{5} \div 2$



3. Use the diagram to work out $\frac{1}{8} \div 2$



4. Use diagrams to work out these divisions.

$$\frac{1}{4} \div 3 =$$

$$\frac{1}{3} \div 4 =$$

5. Write calculations to match these diagrams.



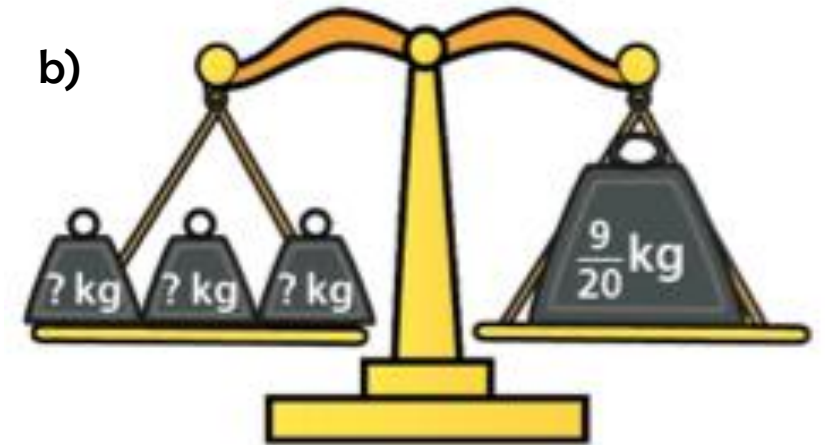
6. Joan shares $\frac{8}{10}$ of a litre of juice equally between 4 glasses.

How much juice is in each glass?

DIVE DEEPER 2



7. Calculate the weights.



♥ is a whole number.

● is a fraction.

a) Find values for ♥ and ●.

$$\text{♥} = \square$$

$$\text{●} = \square$$

b) What do you notice? Explain using diagrams or words.

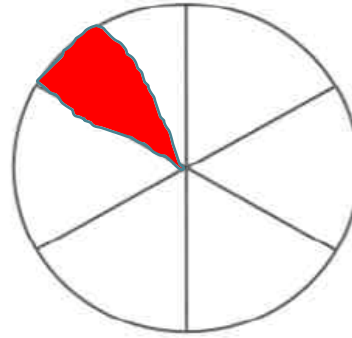


$$\frac{10}{\text{♥}} \div 2 = \frac{1}{2} \times \text{●}$$

1. A circle is divided into 6 equal parts.

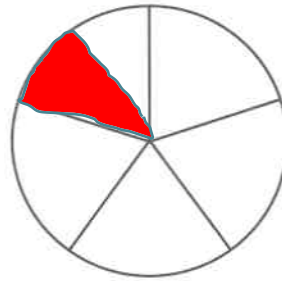
Divide 1 of the sixths into 2 parts.
Shade in 1 of the parts you have just made.

What fraction of the circle is shaded? $\frac{1}{12}$



2. Use the diagram to work out $\frac{1}{5} \div 2$

$\frac{1}{10}$



3. Use the diagram to work out $\frac{1}{8} \div 2$

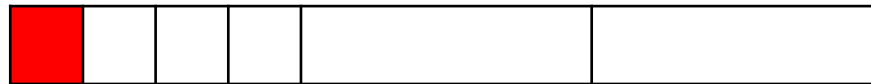
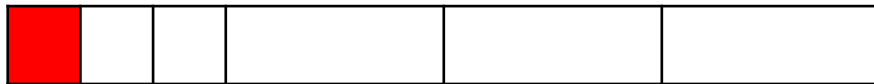
$\frac{1}{8} \div 2 = \frac{1}{16}$



4. Use diagrams to work out these divisions.

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

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



5. Write calculations to match these diagrams.

$$\frac{1}{3} \div 2 = \frac{1}{6}$$



$$\frac{1}{5} \div 3 = \frac{1}{15}$$



$$\frac{1}{2} \div 4 = \frac{1}{8}$$



6. Joan shares $\frac{8}{10}$ of a litre of juice equally between 4 glasses.

How much juice is in each glass? $\frac{8}{10} \div 4 = \frac{8}{40} = \frac{1}{5}$

7. Calculate the weights.

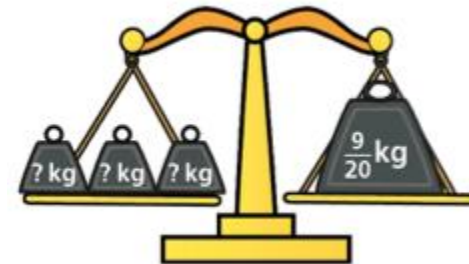
$$A = \frac{8}{9} \div 2 = \frac{8}{18} = \frac{4}{9}$$

$$B = \frac{9}{20} \div 3 = \frac{9}{60} = \frac{3}{20}$$

a)



b)



9a. Johnny has $5\frac{10}{12}$ of his packet of sweets left.

He wants to share them between himself and six friends.

Write the calculation.

What fraction of sweets does each child get?

9b. Clark has $2\frac{8}{12}$ layers of a box of chocolates left.

He wants to share them between himself and seven friends.

Write the calculation.

What fraction of chocolates does each child get?

Complete vertical sheet

