

Equivalence: finding $\frac{1}{2}$ and $\frac{2}{4}$ of amounts within shapes

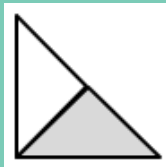
WORKED EXAMPLE

Equivalent fractions can be seen in the context of shapes divided into equally sized pieces.

$$\frac{1}{2} \text{ of } 1 = \frac{1}{2}$$

1 out of 2 equal parts

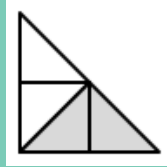
$$\frac{1}{2}$$



$$\frac{1}{2} \text{ of } 4 = 2$$

2 out of 4 equal parts

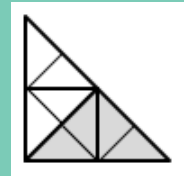
$$\frac{2}{4}$$



$$\frac{1}{2} \text{ of } 8 = 4$$

4 out of 8 equal parts

$$\frac{4}{8}$$

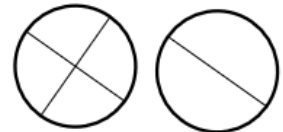
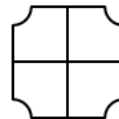
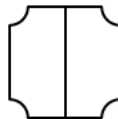
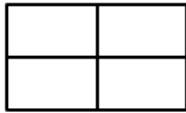
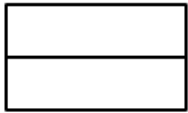


REHEARSE

Explain to a partner how the worked example above shows that half is equivalent to two quarters.

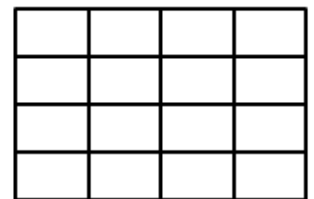
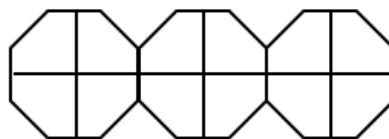
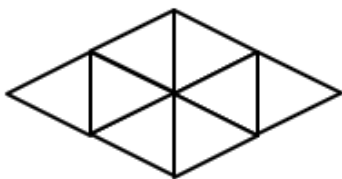
REHEARSE

Show how you could colour in $\frac{1}{2}$ and $\frac{2}{4}$ of these shapes to prove they are equivalent.



REHEARSE

Colour $\frac{1}{4}$ of each shape by counting the number of equally sized pieces and calculating $\frac{1}{4}$.

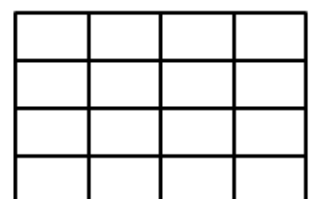
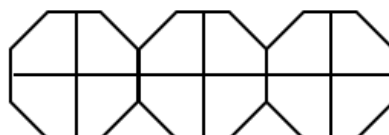
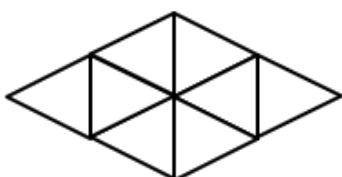


$$\frac{1}{4} \text{ of } 8 = \underline{\hspace{2cm}}$$

$$\frac{1}{4} \text{ of } \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\frac{1}{4} \text{ of } \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Use $\frac{1}{4}$ of each shape to work out $\frac{2}{4}$ and colour this on the shapes below.



$$\frac{2}{4} \text{ of } 8 = \underline{\hspace{2cm}}$$

$$\frac{2}{4} \text{ of } \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\frac{2}{4} \text{ of } \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

RETRIEVE

Can I still identify parts and wholes to solve problems?

Liz went shopping with £80.

She spent some money on a new dress.

She has £23 left.

How much money did she spend on the dress?

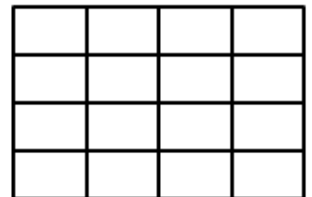
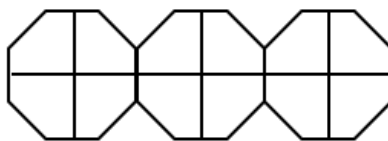
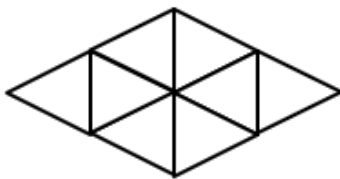
Model the problem to work out the calculation needed to solve the problem.

REHEARSE

Is it easy to see that $\frac{2}{4} = \frac{1}{2}$ from your colouring?

If it is NOT easy to see $\frac{2}{4} = \frac{1}{2}$ from your colouring, use the shapes below to see if you can make it more obvious.

If it is easy to see $\frac{2}{4} = \frac{1}{2}$ from your colouring, use the shapes below to see if you can make it less obvious.



APPLY AND EXPLORE

Colour $\frac{2}{4}$ of this shape to make it obvious that $\frac{2}{4} = \frac{1}{2}$.



Colour $\frac{2}{4}$ of this shape so that no 2 adjoining pieces are coloured in.

