

Year 4 Maths

Fractions

(Including adding and subtracting fractions with the same denominator)

What is a fraction?

A fraction is a way of representing part of a whole.

It is written with a numerator
(which shows us how many
pieces you have)



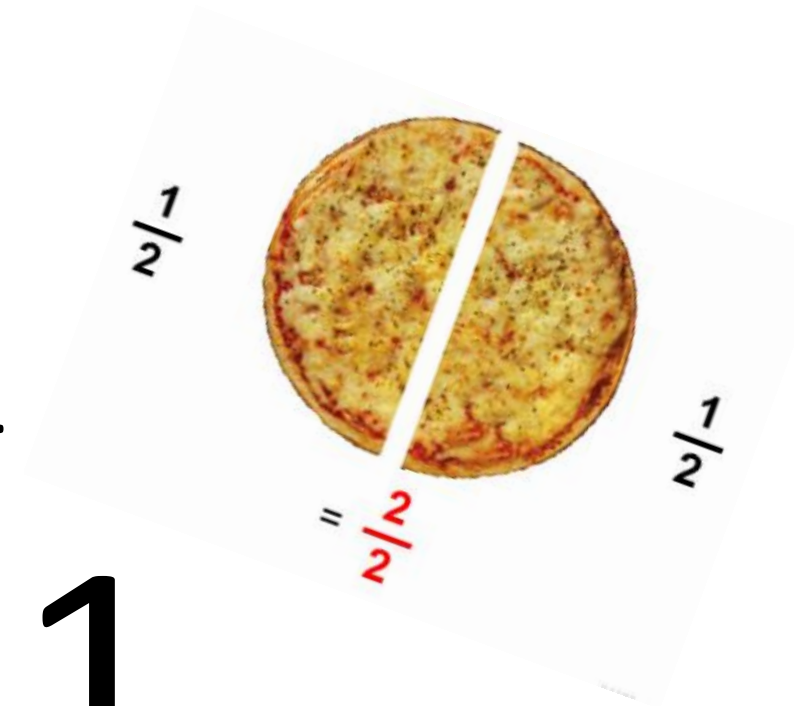
1

—

And a denominator
(which shows how many equal
sized pieces the whole is broken
into)



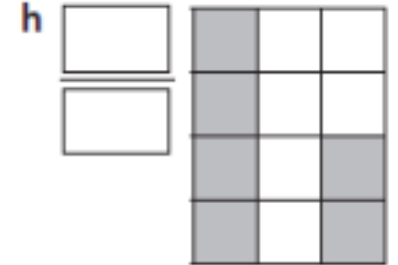
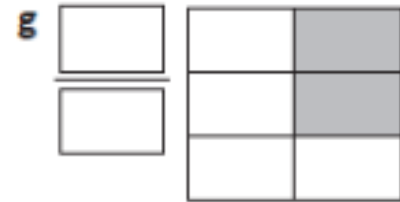
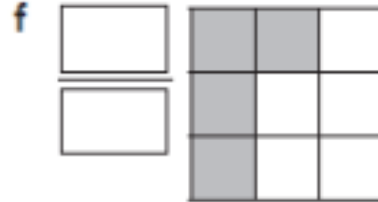
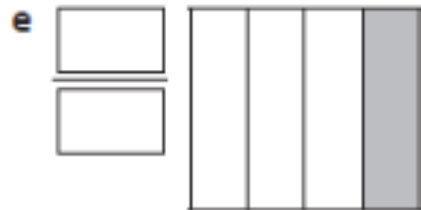
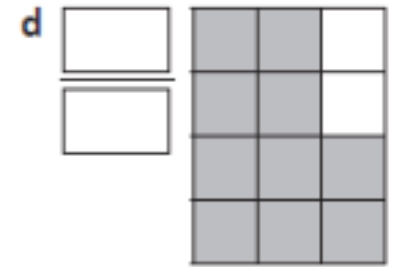
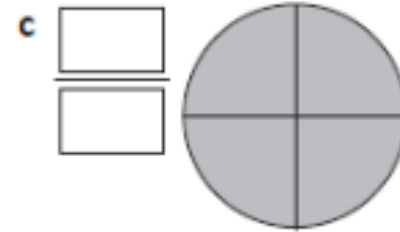
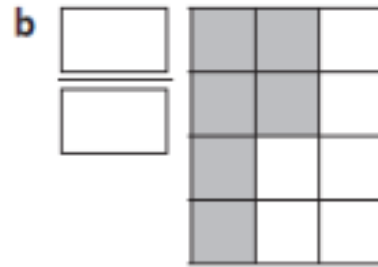
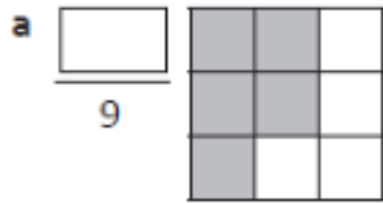
2



Can you write the fraction of the shape that is shaded?

Remember – the denominator (bottom number) is the number of equal pieces the whole has been broken into.

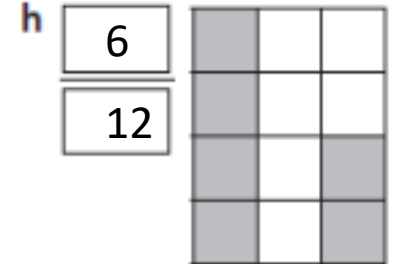
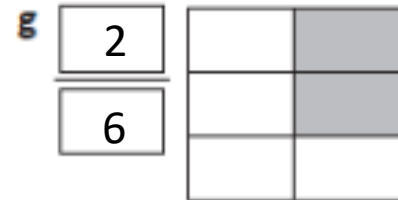
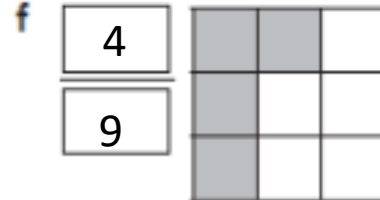
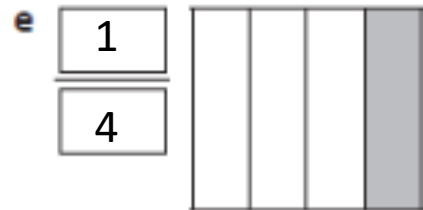
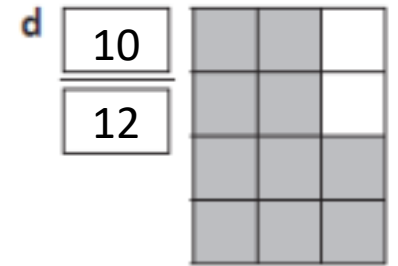
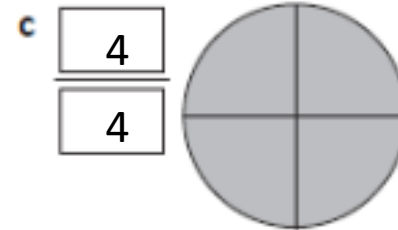
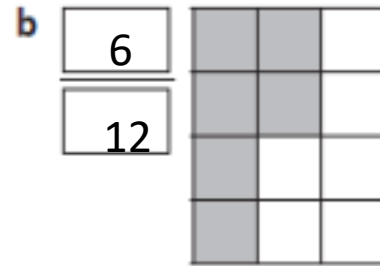
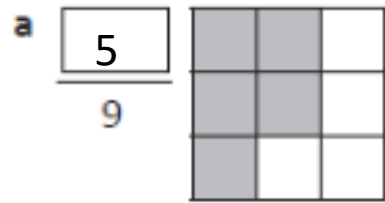
The numerator (top number) is the number of shaded pieces.



Can you write the fraction of the shape that is shaded? ANSWERS!

Remember – the denominator (bottom number) is the number of equal pieces the whole has been broken into.

The numerator (top number) is the number of shaded pieces.



Are these statements true or false? Explain how you know!

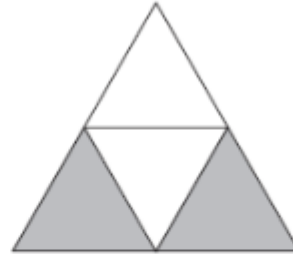
a

 $\frac{6}{9}$ is shaded

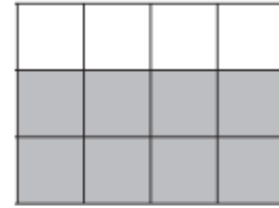
b

 $\frac{1}{4}$ is shaded

c

 $\frac{1}{3}$ is shaded

d

 $\frac{7}{12}$ is shaded

Are these statements true or false? Explain how you know!

a



$\frac{6}{9}$ is shaded

True

The shape is divided into 9 equal pieces, and 6 are shaded in.

b

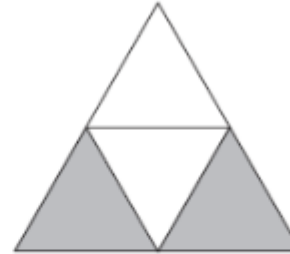


$\frac{1}{4}$ is shaded

True

The shape is divided into 4 equal pieces, and 1 is shaded in.

c

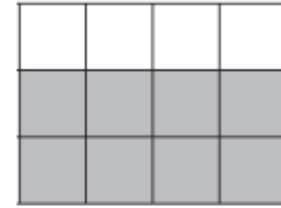


$\frac{1}{3}$ is shaded

False

The shape is divided into 4 equal pieces, and 2 are shaded in so the statement should be $\frac{2}{4}$ is shaded.

d



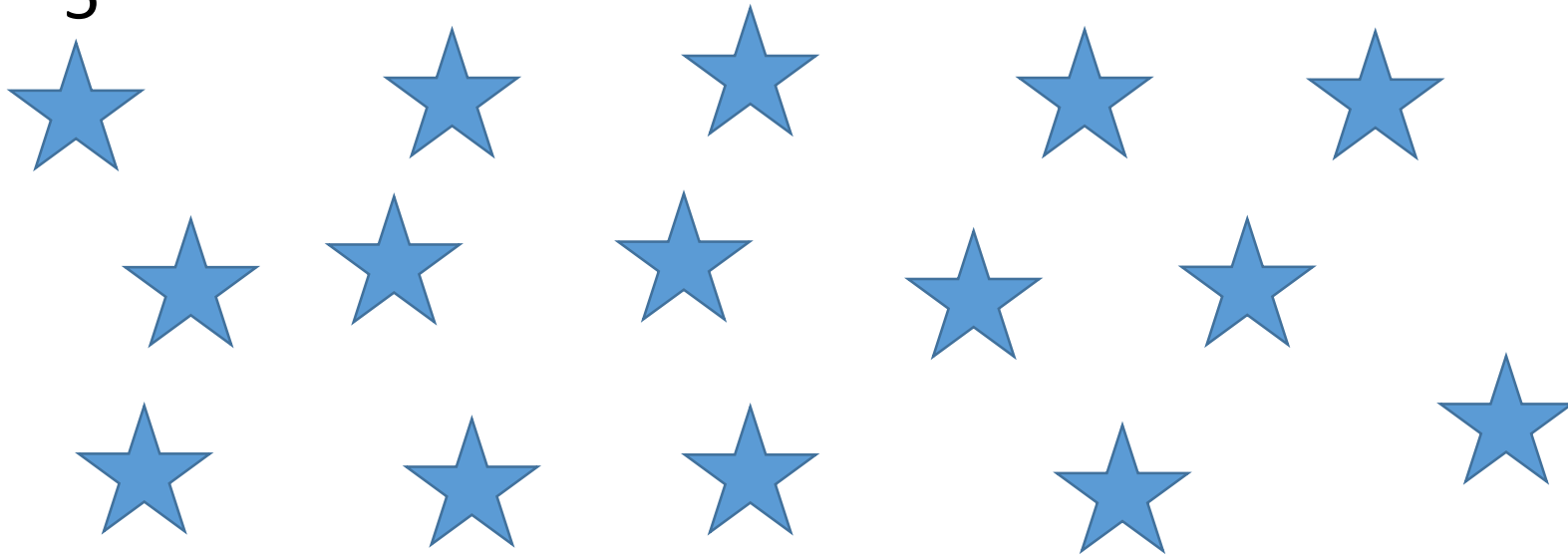
$\frac{7}{12}$ is shaded

False

The shape is divided into 12 equal pieces, but 8 are shaded in so the statement should be $\frac{8}{12}$ is shaded.

You can also find fractions of a group of items.

What is $\frac{3}{5}$ of the stars?

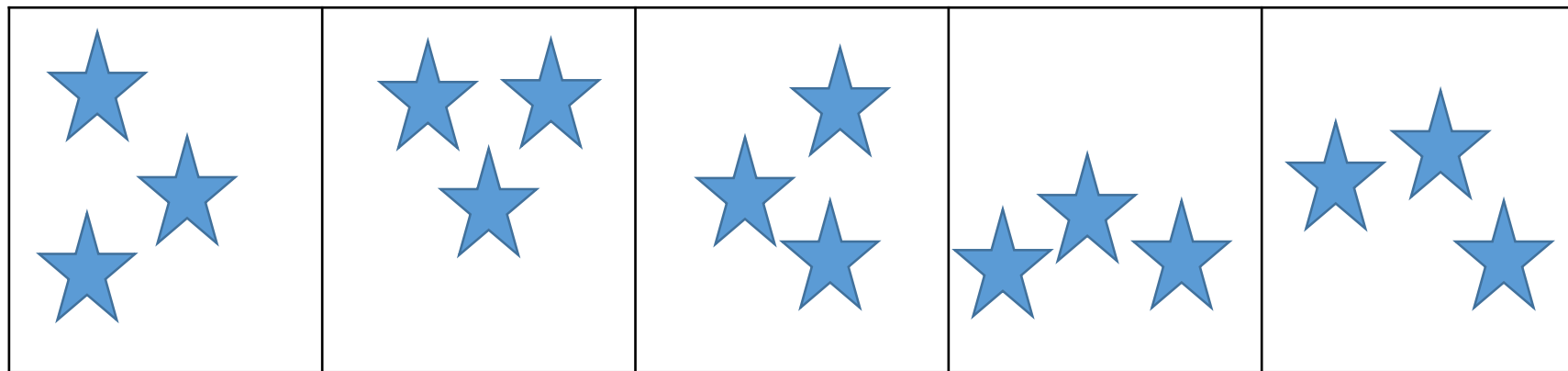


To answer this, you need to look carefully at the fraction.

What is $\frac{3}{5}$ of the stars?



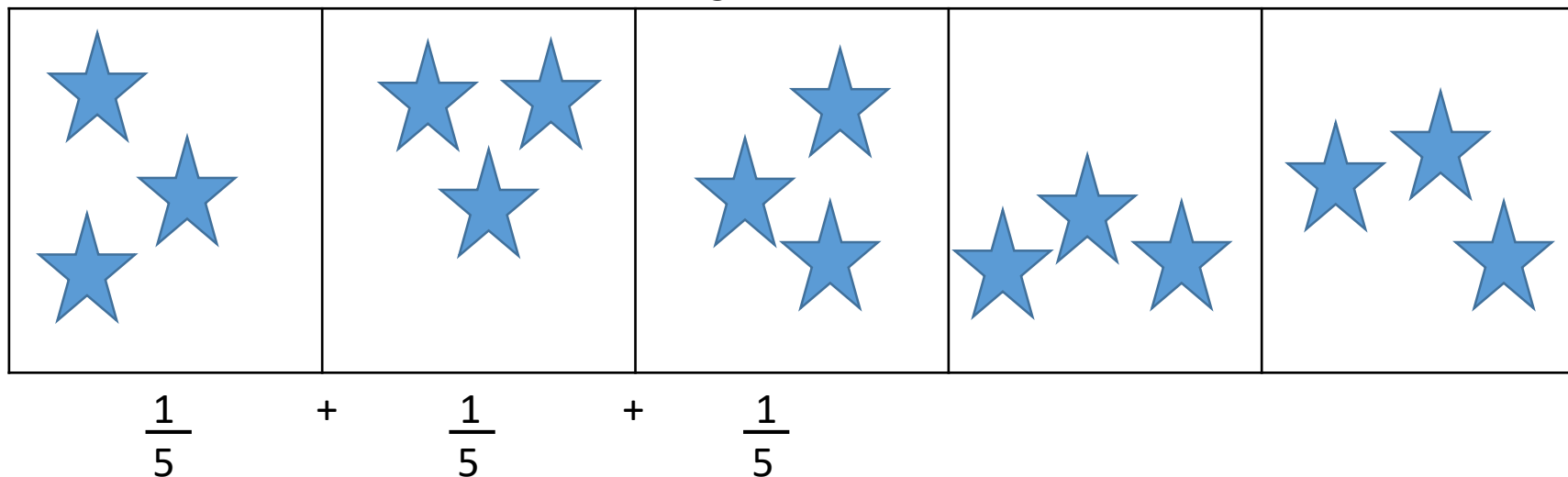
The denominator (bottom number) tells you that you need to split the group into 5 equal sized groups



To answer this, you need to look carefully at the fraction.

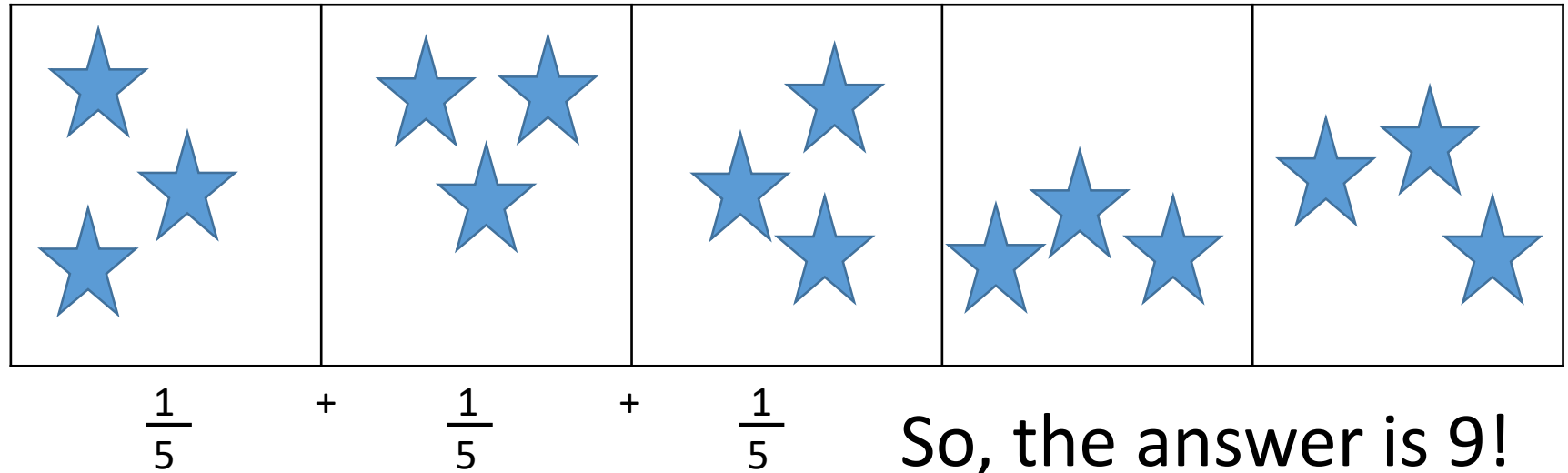
What is $\frac{3}{5}$ of the stars?

Each of these boxes represent $\frac{1}{5}$, so you need to add 3 of them together.



To answer this, you need to look carefully at the fraction.

What is $\frac{3}{5}$ of the stars?



Now it's time for you to have a go!

Find $\frac{2}{3}$ of Tia's marbles.



I have divided the marbles into 3 equal groups.

There are marbles in each group.

$\frac{2}{3}$ of Tia's marbles is marbles.

Answer!

Find $\frac{2}{3}$ of Tia's marbles.



I have divided the marbles into 3 equal groups.

There are marbles in each group.

$\frac{2}{3}$ of Tia's marbles is marbles.

Now have a go at Day 1 tasks

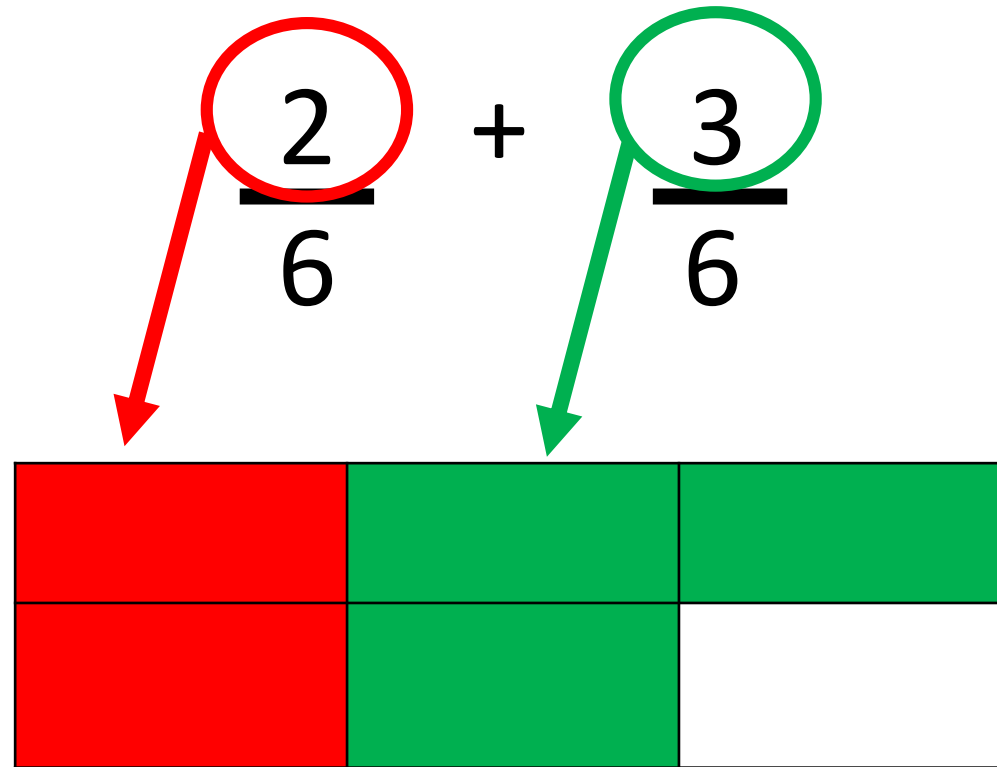
Day 2

Adding and subtracting fractions with the same denominator

When adding and subtracting fractions with the same denominator (bottom number), you will only ever need to worry about the numerator.

$$\frac{2}{6} + \frac{3}{6} = ?$$

You can find your answer by using a shape divided into the same number of sections as your denominator!



So, your answer is the number of shaded pieces!

$$\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$$



You have a go at these questions!

Try these. Draw some diagrams if that will help you.

a $\frac{1}{5} + \frac{2}{5} = \frac{\boxed{}}{\boxed{}}$

b $\frac{2}{7} + \frac{3}{7} = \frac{\boxed{}}{\boxed{}}$

c $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{\boxed{}}{\boxed{}}$

d $\frac{1}{10} + \frac{5}{10} + \frac{1}{10} = \frac{\boxed{}}{\boxed{}}$

Answers!

Try these. Draw some diagrams if that will help you.

$$\text{a} \quad \frac{1}{5} + \frac{2}{5} = \frac{\boxed{3}}{\boxed{5}}$$

$$\text{b} \quad \frac{2}{7} + \frac{3}{7} = \frac{\boxed{5}}{\boxed{7}}$$

$$\text{c} \quad \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{\boxed{3}}{\boxed{4}}$$

$$\text{d} \quad \frac{1}{10} + \frac{5}{10} + \frac{1}{10} = \frac{\boxed{7}}{\boxed{10}}$$

Subtracting fractions is just as straightforward!

$$\frac{8}{9} - \frac{2}{9}$$

You just need to subtract the numerators – the denominator will stay the same.

$$\frac{8}{9} - \frac{2}{9}$$



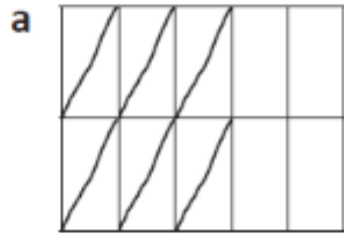
You then just need to count how many filled in sections you have left!

$$\frac{8}{9} - \frac{2}{9} = \frac{6}{9}$$

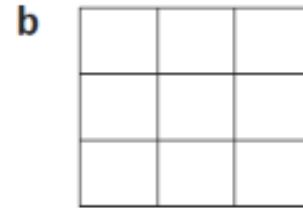


Now it's your turn!

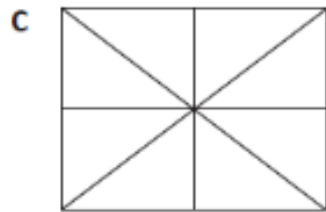
Find answers to these subtraction problems. The first one has been done for you.



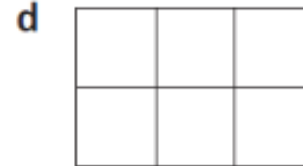
$$\frac{10}{10} - \frac{6}{10} = \frac{\boxed{4}}{\boxed{10}}$$



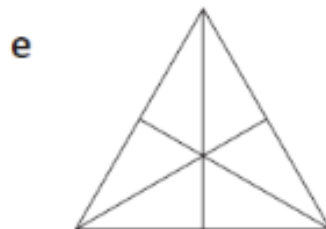
$$\frac{9}{9} - \frac{8}{9} = \frac{\boxed{}}{\boxed{}}$$



$$\frac{8}{8} - \frac{4}{8} = \frac{\boxed{}}{\boxed{}}$$



$$\frac{6}{6} - \frac{2}{6} = \frac{\boxed{}}{\boxed{}}$$



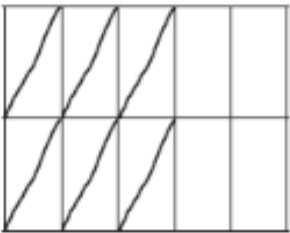
$$\frac{6}{6} - \frac{2}{6} = \frac{\boxed{}}{\boxed{}}$$

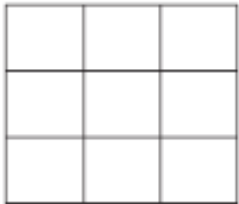


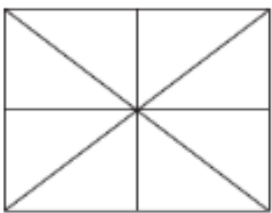
$$\frac{8}{8} - \frac{6}{8} = \frac{\boxed{}}{\boxed{}}$$

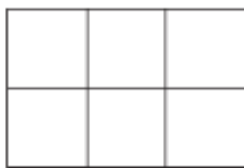
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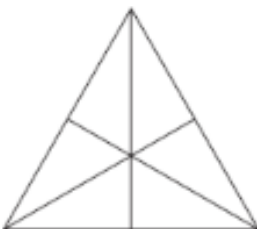
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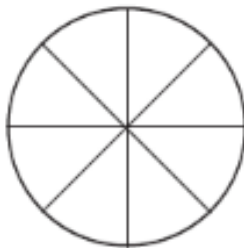
a  $\frac{10}{10} - \frac{6}{10} = \frac{4}{10}$

b  $\frac{9}{9} - \frac{8}{9} = \frac{1}{9}$

c  $\frac{8}{8} - \frac{4}{8} = \frac{4}{8}$

d  $\frac{6}{6} - \frac{2}{6} = \frac{4}{6}$

e  $\frac{6}{6} - \frac{2}{6} = \frac{4}{6}$

f  $\frac{8}{8} - \frac{6}{8} = \frac{2}{8}$

Now do Day 2's questions!

Day 3 tasks

Have a go at the problems for Day 3.