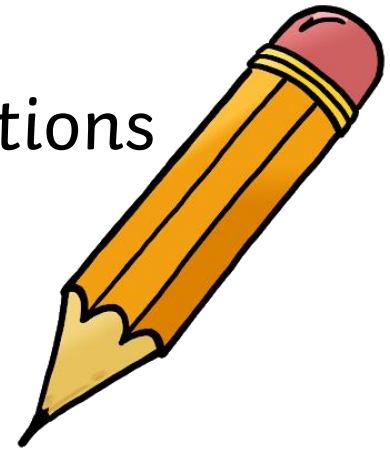


# Year 6

## Home learning

### Maths

Day 10. Mixed number fractions



# Maths: Active

Perform knees to elbows while you recite a times table you find challenging, for example:

**1 x 7 = , 2 x 7 = up to 12 x 7 =**

Can you do it backwards?

**12 x 7 = , 11 x 7 = ...**



# Maths: Mixed numbers

We're going to look at using pictures and diagrams to help you solve mixed number problems.

*What possible calculation could this be?*



# Maths: Mixed numbers



Did you think of:


$$6 + 6 + 3 = 15 \text{ or } 6 \times 2 + 3 = 15$$

$$15 = 6 + 6 + 3 \text{ or } 15 = 6 \times 2 + 3$$

$$1 + 1 + \frac{1}{2} = 2 \frac{1}{2} \text{ or } 2 \frac{1}{2} = 1 + 1 + \frac{1}{2}$$

$$\frac{6}{6} + \frac{6}{6} + \frac{3}{6} = \frac{15}{6}$$

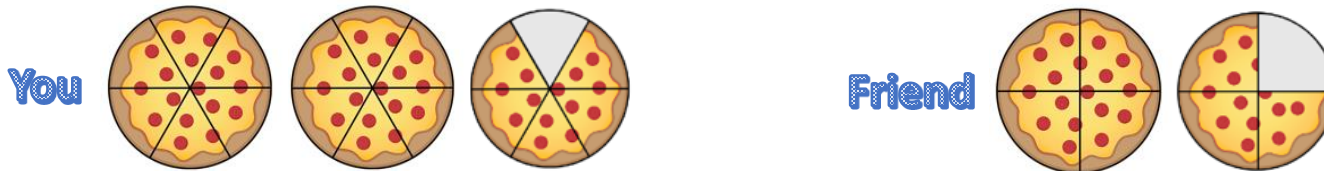
# Maths: Mixed numbers

 Now draw your own picture calculation representing mixed numbers.



# Maths: Mixed numbers

The local pizza shop has a great offer of 5 pizzas for £15.



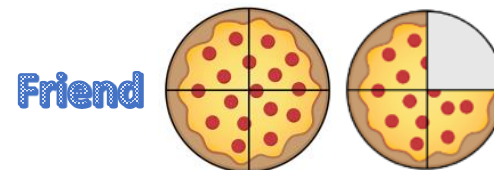
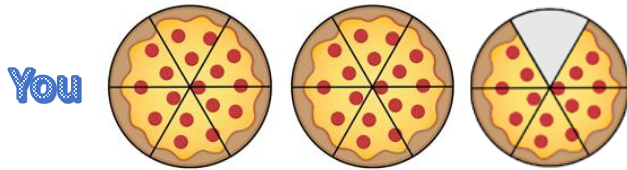
You and a friend have had a slice of pizza each.

You're trying to work out what's left but...

You have cut your pizza into 6<sup>th</sup>s whereas your friend has cut theirs into  $\frac{1}{4}$ .

This makes it difficult to figure exactly what's left.

# Maths: Mixed numbers



What does this picture actually mean?

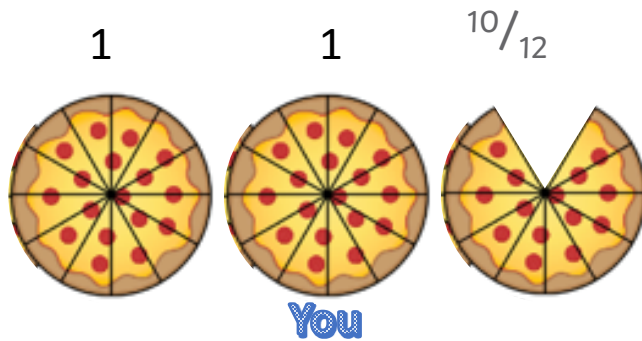
$$2 \frac{5}{6} + 1 \frac{3}{4} =$$

First, you'll need to find the lowest common multiple for each **denominator**.

In this case **6** and **4** both have **12** in their times tables.

Now you can consider your pizzas to be sliced in **12 parts**.

# Maths: Mixed numbers



What happens to the **numerators**?

Ask what did I do to convert my **denominator**?

$$2 \frac{5}{6} = 2 \frac{?}{12}$$

Multiply by 2

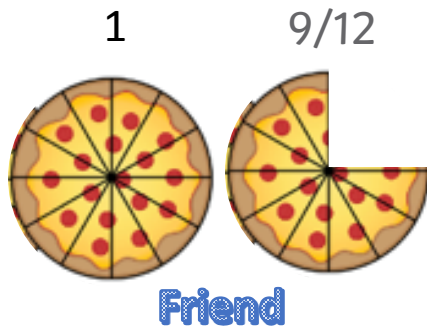
$$2 \frac{5}{6} = 2 \frac{10}{12}$$

Multiply by 2

You have to do the same operation to both the numerator and the denominator.



# Maths: Mixed numbers



What happens to the **numerators** here?

What did I do to convert my **denominator**?

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

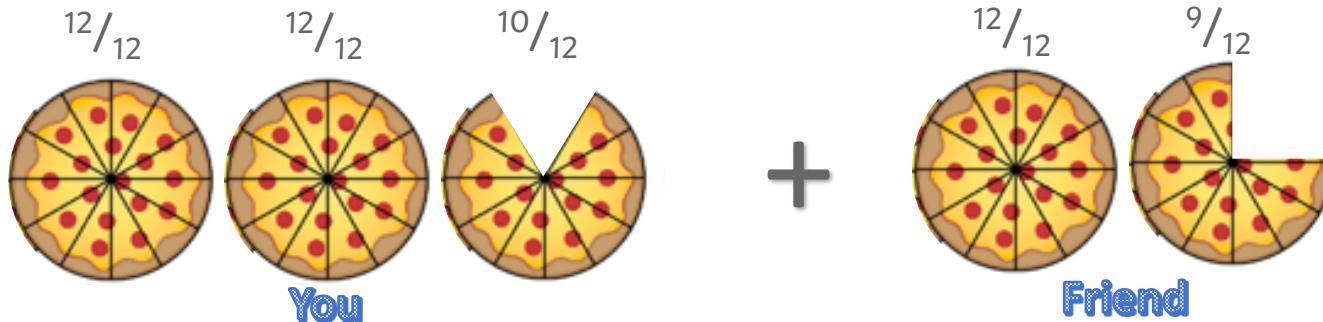
Multiply by 3

$$1 \frac{3}{4} = 1 \frac{9}{12}$$

Multiply by 3

You have to do the same operation to both the numerator and the denominator.

# Maths: Mixed numbers



As we add up our slices our **denominator** will stay the same because we are not changing the size of each slice.

In total we have  $55/12$  slices.

To convert this we first consider how many full pizzas we have. (A full pizza has 12 slices: the same as the denominator).

How many 12s do we have in our total amount of slices?

We have 4 ( $4 \times 12 = 48$ ) with  $7/12$  left over.

$$\text{So } 2 \frac{5}{6} + 1 \frac{3}{4} = 4 \frac{7}{12}$$

# Maths: Mixed numbers



a)  $1\frac{1}{2} + 1\frac{1}{3}$

e)  $1\frac{2}{7} + 1\frac{2}{8}$

b)  $4\frac{1}{2} + 4\frac{1}{3}$

f)  $13\frac{2}{7} + 8\frac{2}{8}$

c)  $12\frac{1}{2} + 16\frac{1}{3}$

g)  $1\frac{8}{9} + 1\frac{3}{11}$

d)  $1\frac{1}{7} + 1\frac{1}{8}$

h)  $17\frac{3}{11} + 3\frac{8}{9}$

Ext:  $17\frac{3}{11} + 4\frac{8}{9} + 5\frac{1}{3}$

# Maths: Mixed numbers answers



a)  $1\frac{1}{2} + 1\frac{1}{3} =$

e)  $1\frac{2}{7} + 1\frac{2}{8}$

b)  $4\frac{1}{2} + 4\frac{1}{3}$

f)  $13\frac{2}{7} + 8\frac{2}{8}$

c)  $12\frac{1}{2} + 16\frac{1}{3}$

d)  $1\frac{1}{7} + 1\frac{1}{8}$

Ext:  $17\frac{3}{11} + 4\frac{8}{9} + 5\frac{1}{3}$