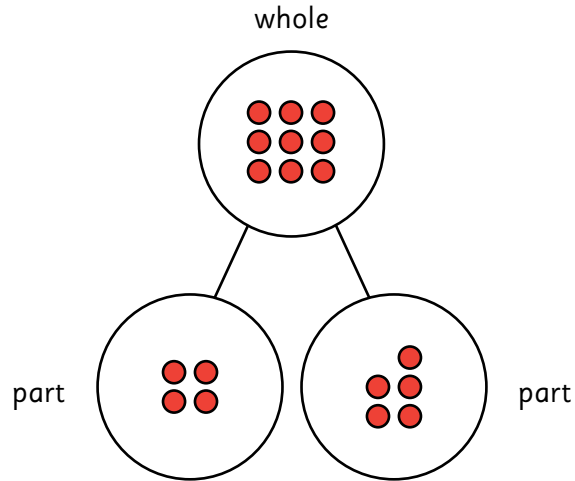


Part-whole model

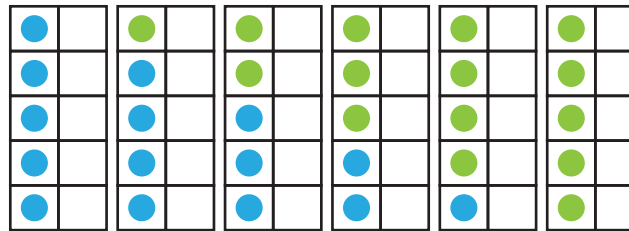


$$4 + 5 = 9$$

part + part = whole

Number bonds within 10

Number bonds are pairs of numbers that can be added together to make another number. We can use a tens frame and counters to find each number bond starting with 0, then 1, then 2 etc.

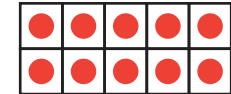


These additions make the number bonds to 5.

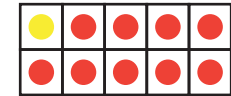
$$\begin{array}{ll} 0 + 5 = 5 & 3 + 2 = 5 \\ 1 + 4 = 5 & 4 + 1 = 5 \\ 2 + 3 = 5 & 5 + 0 = 5 \end{array}$$

Number bonds to 10

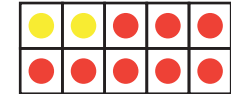
$$0 + 10 = 10$$



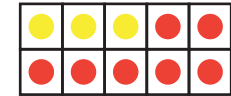
$$1 + 9 = 10$$



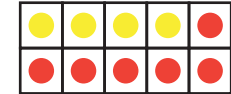
$$2 + 8 = 10$$



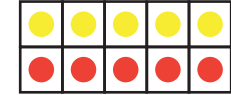
$$3 + 7 = 10$$



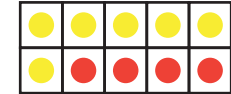
$$4 + 6 = 10$$



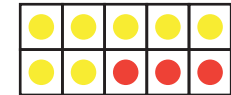
$$5 + 5 = 10$$



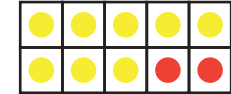
$$6 + 4 = 10$$



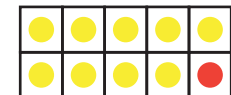
$$7 + 3 = 10$$



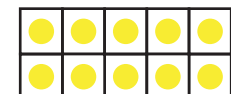
$$8 + 2 = 10$$



$$9 + 1 = 10$$

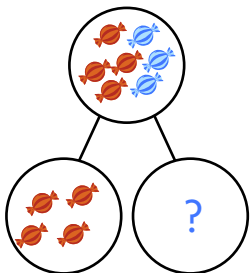


$$10 + 0 = 10$$



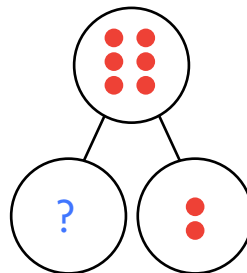
Find a part

When finding a part, we can use adding on or use subtraction to help us.



$$\begin{array}{l} 4 + 3 = 7 \\ 7 = 4 + 3 \end{array}$$

There are 7 sweets in total.
4 of the sweets are red so there must be 3 blue sweets.



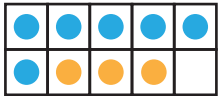
$$\begin{array}{l} 2 + 4 = 6 \\ 6 - 2 = 4 \end{array}$$

There are 6 counters in total.
2 counters are red so there must be 4 blue counters

Addition

Add together

There are 6 blue counters and 3 yellow counters.



$$6 + 3 = 9$$

6 plus 3 is equal to 9.

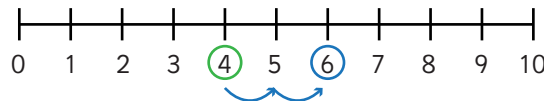
There are 9 counters altogether.

Add more

First, I had 4 cupcakes.
Then, I baked 2 more cupcakes.
Now, there are 6 cupcakes.



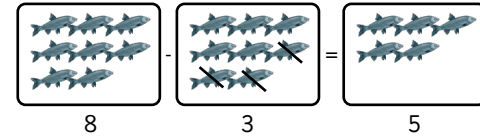
$$4 + 2 = 6$$



Subtraction

Take away

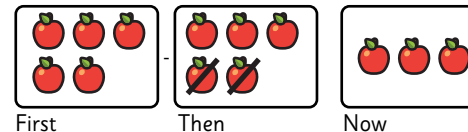
First, I had 8 fish.
Then, 3 fish swam away.
Now, I have 5 fish.



$$8 - 3 = 5$$

Number line

First, I had 5 apples.
Then, I ate 2 apples.
Now, I have 3 apples.



I start on 5.
I make 2 jumps.
I land on 3.

Fact families

Using a part-whole model to help us, there are eight facts that we can write.

$$\text{part} + \text{part} = \text{whole}$$

$$\text{part} + \text{part} = \text{whole}$$

$$\text{whole} - \text{part} = \text{part}$$

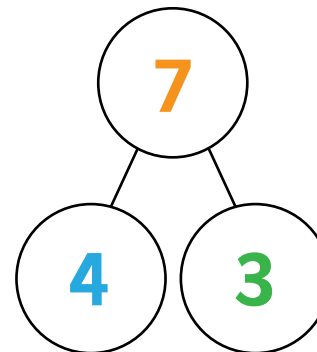
$$\text{whole} - \text{part} = \text{part}$$

$$\text{whole} = \text{part} + \text{part}$$

$$\text{whole} = \text{part} + \text{part}$$

$$\text{part} = \text{whole} - \text{part}$$

$$\text{part} = \text{whole} - \text{part}$$



$$3 + 4 = 7$$

$$7 = 4 + 3$$

$$4 + 3 = 7$$

$$7 = 3 + 4$$

$$7 - 4 = 3$$

$$3 = 7 - 4$$

$$7 - 3 = 4$$

$$4 = 7 - 3$$