

# I can do *so much more* maths with sweets



Empty out a whole packet of skittles.

Count how many there are.

Are there always the same number in a packet?

Separate out the colours into different piles.

Which colour pile contains the most sweets?

Do certain colours always seem to be more common?

## For each colour pile:

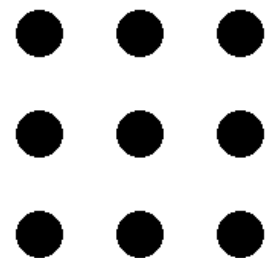
- count the number of sweets in that pile
- is the number odd or even? (if it divides into two, it's even)
- how many different equal piles can you make? (eg 12 sweets can be one pile of 12, 12 piles of one, 2 piles of 6, 6 piles of 2, 3 piles of 4, 4 piles of 3)
- if it won't go into equal piles, then it's called a prime number, which is very exciting.



- will the sweets make a triangle? (start with one, then put two underneath, then a row of three underneath that, then a row of four underneath that etc) – these are called triangular numbers. This is also quite exciting. You can work out triangular numbers because each time you make a new one you have to add on one more than you added on to make the last one. Here is a question:

are there any triangular numbers that are also prime numbers?

- Will the sweets make a square? (eg 2 rows of 2, 3 rows of 3 etc). If so, it is called a square number. You can work out the next square number by adding two to the number you added on to make the last one...
- Here is something to find out: how big a pile of sweets do you need before you find a number that is a triangular number and a square number?



If some of your original colour piles have the same numbers in, you might have to eat some of the sweets straight away so that each pile has a different number in before you do the rest of the maths. This is called subtraction.

Every time we do maths with sweets, we find our more things that you can do. Why not try some maths next time you have sweets?