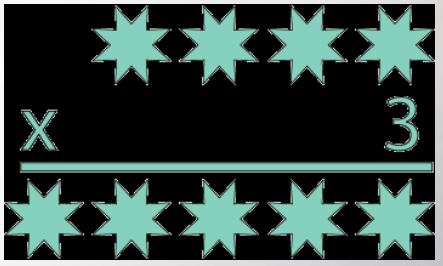
BIG MATHS INVESTIGATION

Multiplication – All the digits

ALL THE DIGITS

This represents the multiplication of a 4-figure number by 3.

- The whole calculation uses each of the digits 0−9 once and once only.
- The 4-figure number contains three consecutive numbers, which are not in order. The third digit is the sum of two of the consecutive numbers.
- The first, third and fifth figures of the five-digit product are three consecutive numbers, again not in order. The second and fourth digits are also consecutive numbers.
- Can you replace the stars in the calculation with figures?



GETTING STARTED

- Use counters or scraps of paper with the digits 0−9 written on them.
- Make a list of 3 consecutive numbers 0−9 remembering that 3 has already been accounted for.
- What could the ones digit of the product be if the multiplication is by 3?
- Which consecutive numbers could be in the four-digit number?
- Which other digit could appear in the four-digit number?

We will have a discussion and reveal the solution tomorrow – see if you can solve it first!