

Digit Challenge

You need: a calculator that shows nine digits
(for example, a scientific calculator)

ACTIVITY ONE

$$\text{Age} \div 2 \text{ or } 3 \text{ or } 4 \text{ or } 5 \text{ or } 6 = \square \text{ r } 1$$

When you divide Matiu's grandmother's age by 2, 3, 4, 5, or 6, the remainder is always 1. How old is Matiu's grandmother? (She is not 100 yet!)



ACTIVITY TWO

1 2 3 4 5 6 7 8 9

Your challenge is to arrange the digits 1, 2, 3, 4, 5, 6, 7, 8, and 9 so that you can do every step below with the same nine-digit number.

In your nine-digit number, the number formed by:

- the first two digits can be divided by 2,
- the first three digits can be divided by 3,
- the first four digits can be divided by 4,
- the first five digits can be divided by 5,
- the first six digits can be divided by 6,
- the first seven digits can be divided by 7,
- the first eight digits can be divided by 8,
- all nine digits can be divided by 9.

I'll try 783 256 149 ...
Will it work for all eight steps?

Hmm ... Perhaps I should do some
thinking about multiples ...

