

Chunking

The easy way to
divide!

Remember, when we are **dividing** we are finding out how many sets of a given number we can make.

So, $32 \div 4$ means:

How many sets of 4 can we make out of 32?

Chunking can give us a shortcut to finding this number of sets.

Example: $56 \div 4 = 14$

We know that $10 \times 4 = 40$, so we know we can make 10 sets of 4 out of 56.

If we take away the 40 we have used up to make our 10 sets of 4, we will have 16 left.

We know that $4 \times 4 = 16$, so we can make 4 more sets of 4.

In total we have made 14 sets of 4.

Key points to help you with chunking:

- Learn your times tables!
- Remember that *divide* means *repeatedly subtract*.
- Aim for the largest possible "chunk" at each stage in order to cut down on the steps you need to take.

Go to the next slides to see some more examples of chunking and how it is set out.

$72 \div 4$ (How many sets of 4 in 72?)

18

$$\begin{array}{r} 4 \overline{) 72} \\ - 40 \\ \hline 32 \\ - 32 \\ \hline 0 \end{array}$$

(10 \times 4 = 40 ; we have made 10 lots of 4)

(8 \times 4 = 32; we have made 8 lots of 4)

We circle the number of sets we have made.

In total, we have made 18 sets of 4.

So, $72 \div 4 = 18$

$84 \div 6$ (How many sets of 6 in 84?)

$$\begin{array}{r} 14 \\ 6 \overline{) 84} \\ \underline{- 60} \\ 24 \\ \underline{- 24} \\ 0 \end{array}$$

(10 \times 6 = 60; we have made 10 sets of 6)

(4 \times 6 = 24; we have made 4 sets of 6)

We circle the number of sets we have made.

In total, we have made 14 sets of 6.

So, $84 \div 6 = 14$

$$99 \div 6 = (\text{How many sets of 6 in 99?})$$

16 r 3

$$\begin{array}{r} 6 \overline{) 99} \\ - 60 \\ \hline 39 \\ - 36 \\ \hline 3 \end{array}$$

(10 × 6 = 60; we have made 10 sets of 6)

(6 × 6 = 36; we have made 6 sets of 6)

3 (we only have 3 left so cannot make another set of 6)

$$\text{So, } 99 \div 6 = 16 \text{ remainder } 3$$

More Chunking

Let's try some bigger
numbers!

$199 \div 16$ (How many sets of 16 in 199?)

$$\begin{array}{r} 12 \text{ r } 7 \\ 16 \overline{) 199} \\ \underline{- 160} \quad (10 \times 16 = 160) \\ 39 \\ \underline{- 32} \quad (2 \times 16 = 32) \\ 7 \end{array}$$

So, $199 \div 16 = 12$ remainder 7

702 ÷ 45 (How many sets of 45 in 702?)

15 r 27

$$\begin{array}{r} 4 \overline{) 702} \\ - 450 \\ \hline 252 \\ - 180 \\ \hline 72 \\ - 45 \\ \hline 27 \end{array}$$

(10 x 45 = 450)
(4 x 45 = 180)
(1 x 45 = 45)

So, $702 \div 45 = 15$ remainder 27

Congratulations!

You are now a

"Chunking Expert!"