## **Mental Multiplication and Division**

Before writing out a calculation, it's always good to check if there is a quicker way to solve it **mentally**.

Mentally means 'in your head', or without writing things down.

The most useful tool for this is knowing your **times tables**, but there are some other strategies that can help as well!



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## **Mental strategies**

Sometimes a big number can be **split into smaller numbers** by breaking it down into its **factors**.

Let's say we want to calculate **7 x 16**.

Multiplying by 16 is hard, but we can break 16 down to its factors.  $16 = 8 \times 2$ . So what if we start by **multiplying by 8** and then **multiply by 2**!

7 **x 8** = 56

56 **x 2** = 112

So the answer to **7 x 16** is **112**!

Some numbers have special tricks that we can use even with big numbers!

For example, to **multiply by 5**, we can simply **multiply by 10** and then **divide by 2**.

$$46 \times 5$$
  
46 × 10 = 460 460 ÷ 2 = 230

We can do the opposite to **divide by 5**! In this case, we **divide by 10** and then **multiply by 2**.



These two small steps are easier than one big

step!





## So **17 x 50 = 850**, the correct answer is **B**!

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