

## Can I find percentages of amounts?

This is a really important skill – we need to be able to work our percentages of amounts often, especially when shopping!

Here's an example question:

Liverpool FC are playing West Ham United at Anfield. The stadium holds 54,000 fans and is full. 60% of the crowd are Liverpool supporters. How many Liverpool fans are in the stadium?

We need to find 60% of 54,000 in order to work out the answer.

There is more than one way of solving this question. Below are the steps we would use in school:

### Step 1 – find 10%

Find 10% of the number first. We know that 10% is the same as  $\frac{1}{10}$  and that we find a tenth of a number by dividing by 10:

$$54,000 \div 10 = 5,400$$


this means that 10% of 54,000 = 5,400

### Step 2 – use 10% to find the amount you are asked for

Once we know what 10% of the number is, we can work out the % needed in the question. In this case, we need to find 60% which is 6 lots of 10%:

$$5,400 \times 6 = 32,400$$

This is 10% that we  
found in step 1.



### Step 3 – give the answer

Now you have worked out what 60% is, you need to give your answer separately with the units:

32,000 Liverpool fans

## A second example

Find 35% of 120.

1. Find 10%:  $120 \div 10 = 12$
2. Use 10% to find 30 %:  $12 \times 3 = 36$
3. Use 10% to find 5%:  $12 \div 2 = 6$
4. Add 30% and 5% together to find 35%:  $36 + 6 = 42$

### Steps summary

1. Find 10% first
2. Use 10% to find the answer
3. Give your answer separately and include units

### Marvellous

1. Find 10% of 140
2. Find 20% of 140
3. Find 10% of 1600
4. Find 30% of 1600
5. Find 10% of 80
6. Find 40% of 80
7. Find 10% of 36
8. Find 50% of 36 – can you find more than one way of solving this?

### Magnificent

1. Find 70% of 1300
2. Find 45% of 160
3. Find 35% of 48
4. Find 60% of 860
5. Find 75% of 120
6. Find 25% of 36

### Mind-blowing

1. If  $25\% = \frac{1}{4}$  work out these:  
a. 25% of 6      b. 25% of 36      c. 75% of 12
2. If  $5\% = \frac{1}{20}$  work out these:  
a. 5% of 80      b. 35% of 40      c. 65% of 200
3. A cereal box usually weighs 250g. The box says, “30% extra.”  
How many grams does the larger box weigh?  
How many more grams is this compared to the normal box?

#### Marvellous

1. Find 10% of 140 = 14
2. Find 20% of 140 = 28
3. Find 10% of 1600 = 160
4. Find 30% of 1600 = 480
5. Find 10% of 80 = 8
6. Find 40% of 80 = 32
7. Find 10% of 36 = 3.6
8. Find 50% of 36 = 18

#### Magnificent

1. Find 70% of 1300 = 910
2. Find 45% of 160 = 72
3. Find 35% of 48 = 16.8
4. Find 60% of 860 = 516
5. Find 75% of 120 = 90
6. Find 25% of 36 = 9

#### Mind-blowing

- 1a. 1.5
- 1b. 9
- 1c. 9
- 2a. 4
- 2b. 14
- 2c. 130
3. 325g which is 75g more