

fs4u

Calculations Using Simple Percentages

'How To' Booklet 11

By the end of this pack you should be able to calculate percentages of amounts and use them to do percentage increases and decreases. You will need paper and pen and a calculator.

Percentages of Amounts

RULE

Calculator.

15% of 300

$$15 \div 100 \times 300 = 45$$

So key the number into your calculator, divide by 100, then multiply by the other number.

$$18\% \text{ of } 50 = 18 \div 100 \times 50 = 9$$

Try these:

1	VAT is $17\frac{1}{2}\%$ (17.5 on a calculator). Work out the VAT on these:				
a	£100	b	£35	c	£20
d	£120	e	£756	f	£500

Find

2	$12\frac{1}{2}\%$ of a population of 200,000
3	40% of £34.00
4	85% of 80 guests
5	10% of 300 shirts
6	75% of 12 kg
7	30% of 30 kg
8	5% of 1000 ml

Percentage Increase and Decrease

Rule

Increase means add on
Decrease means take off

The price of a second hand car has decreased by 20% from £1,500.

What is it worth now?

$$20\% \text{ of } £1,500 = 20 + 100 \times 1,500 = £300$$

As it is a decrease:

$$£1500 - 300 = £1,200$$

If the car had increased by 20%, it would be

$$£1,500 + 300 = £1,800$$

9	A rail season ticket of £540 rises by 12 %. What will it now cost?
10	My electricity bill is £76.50 before VAT at 8% is added. What is it, including VAT?
11	A new house is being built. The cost has increased by 15% from the original £56,000. What does it cost now?
12	Spud-U-Buy does party packs at a discount (decrease) 100 spuds at a 10% discount 200 spuds at a 20% discount Spud chilli costs 85p each Spud cheese costs 75p each Spud salad costs 70p each
a	Calculate the cost of 100 spuds chilli. Work out the discount. What will they cost after the discount is removed?
b	Calculate the cost, after discount of 200 spuds salad.
c	Calculate the cost, after discount of 50 spuds cheese and 150 spuds chilli (discount of 20%)

Assessment Test

1	An employee earning £190 a week is offered an increase of either £13.50 or 7%. Which one would you take?
2	The cost of a package holiday for an adult is £574. It is 70% of that for a child. Find the cost of one adult and one child.
3	The cost of a £8,000 car goes up by 2%. What will its new cost be? What is the deposit of 10% on the new car?