

Year 8 Spring 2

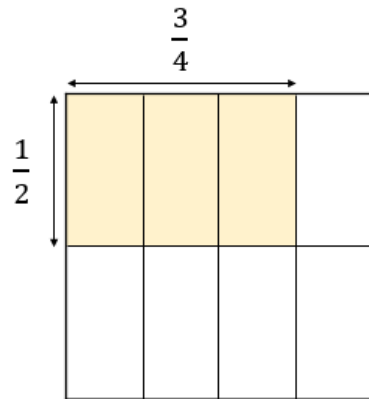
KEYWORDS:

Reciprocal	A pair of numbers that multiply together to give 1	Percentage	Number of parts per 100 - "out of 100"
Divisor	The number that divides another number	Increase	Become greater in size
Quotient	The answer after we divide one number by another	Decrease	Become smaller in size
Integer	A whole number, can be positive, negative or zero	Multiplier	The decimal we use to calculate percentage problems

Multiplying Fractions

Videos 68-69

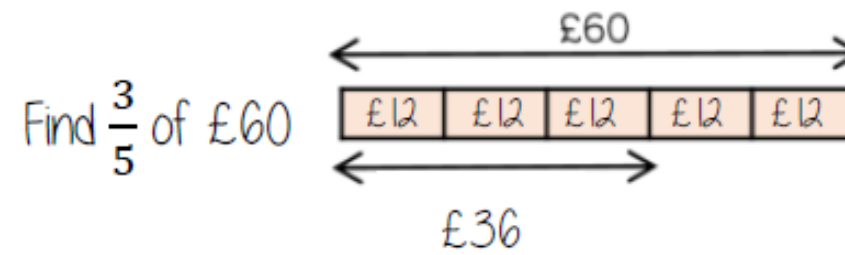
What fraction is shaded?



$$\frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$$

To multiply a fraction by a fraction we times the numerator by the numerator and denominator by the denominator.

Fraction and Percentage of Amounts



Remember
 $\frac{3}{5} = 60\%$

$$\begin{aligned} 10\% \text{ of } £60 &= £6 \\ 50\% \text{ of } £60 &= £30 \\ \hline 60\% \text{ of } £60 &= £36 \end{aligned}$$

Video 77

The Reciprocal

When you multiply a number by its reciprocal the answers is always 1.

$$3 \times \frac{1}{3} = 1$$

The reciprocal of 3 is $\frac{1}{3}$

Think!
What do you multiply 3 by to get 1?

Video 71

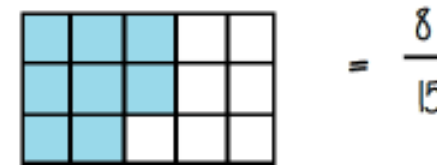
Dividing Fractions

To divide fractions, we multiply by the reciprocal

$$\frac{2}{5} \div \frac{3}{4}$$

$$\frac{2}{5} \times \frac{4}{3}$$

Represented



Video 70

Percentages

A packet of crisps normally weighs 125g. The packet is increased in weight by 20%. What is the new weight of the packet of crisps?



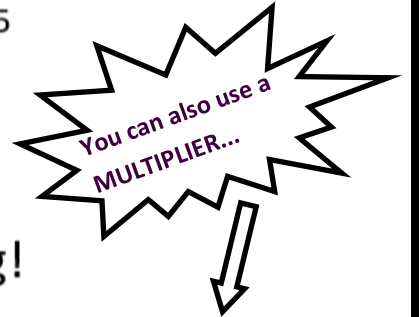
Step 1

10% of 125 is 12.5 so, 20% is 25

Step 2

125 + 25 = 150

Crisps now weigh 150g!



Increase £50 by 60%.

$$160\% \times £50 = 1.6 \times £50 = £80$$

When you decrease by a percentage, work out what you have left...

E.g. 100% - 20% = 80% which is why we multiply by 0.8

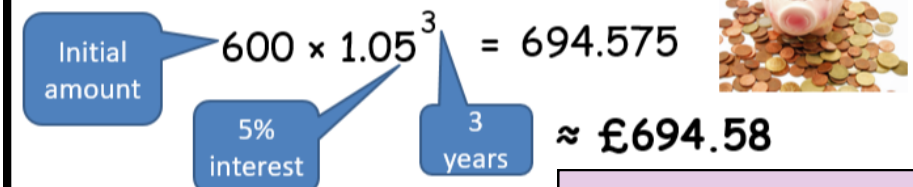
Decrease £65 by 20%.

$$80\% \times £65 = 0.8 \times £65 = £52$$

To find a percentage change...

$$\frac{\text{Difference}}{\text{Original}} \times 100$$

£600 is invested into a savings account paying 5% compound interest per year. How much is in the account after three years?



Video 90, 97

