



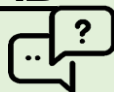
The **reciprocal** of a number is 1 divided by that number.  
E.g. the reciprocal of 3 is 1 divided by 3, which is  $\frac{1}{3}$ .

**Depreciation** is a reduction in the value of something over time.

**Interest** is the cost of borrowing money normally shown as a yearly percentage.  
E.g. 5% interest per annum (every year). A **loan** is a sum of money that is borrowed.

**Compound interest** is based on the original percentage amount and the **interest** that builds up on it in every year from the previous year.

## KEY VOCAB



## KEY KNOWLEDGE

$$\frac{2}{3} + \frac{1}{4} = ?$$

When **adding and subtracting fractions** you must make sure the denominators are the same first. You can do this by finding common factors and forming **equivalent** fractions.

When **multiplying fractions** you must multiply the two numerators. Then, multiply the two denominators.

$$\frac{4}{7} \times \frac{3}{5} = ?$$

$$\frac{2}{3} \div \frac{7}{9} = ?$$

When **dividing fractions** you must find the reciprocal of the second fraction. Next, multiply the two numerators. Then, multiply the two denominators.

$$\text{percentage change} = \frac{\text{actual change}}{\text{original amount}} \times 100$$

## MATHS

Y9 Fractions,  
Decimals &  
Percentages

SPEAK  
READ  
ARTICULATE  
THINK  
QUESTION  
WRITE  
SPELL

### Compound Interest

Lynn puts £78 into a savers account which pays compound interest at a rate of 5% per annum.

**How much will she have after 4 years?**

$$£78 \times 1.05^4 = £94.81$$

### Reverse Percentages

40% of a number is 32.  
What is the number?

$$\begin{aligned} 40\% &= 32 \\ &\div 40 \\ 1\% &= 0.8 \\ &\times 100 \\ 100\% &= 80 \end{aligned}$$

### Decimal Multipliers

**Increase £40 by 15%**

100%	15%	115% so... £40 x 1.15 = £46
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**Decrease \$16 by 15%**

85%	15%	85% so ... \$16 x 0.85 = \$13.60
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## FURTHER READING

<https://www.bbc.co.uk/bitesize/guides/zgg4jxs/revision/1>

<https://corbettmaths.com/contents/>

<https://www.pearsonactivelearn.com/app/library>

$$100\% = 80$$

$$50\% = 40$$

$$25\% = 20$$

$$10\% = 8$$

80

$$75\% = 60$$

$$5\% = 4$$

$$15\% = 12$$

$$1\% = 0.8$$