## Use and apply the speed

formula

Maths

Mrs Dennett

## Use and apply the speed formula

1. Work out the speeds to complete the table.

| Distance <br> $(\mathrm{m})$ | Time <br> taken $(\mathrm{s})$ | Speed <br> $(\mathrm{m} / \mathrm{s})$ |
| :---: | :---: | :---: |
| 6 | 1 |  |
| 12 | 1 |  |
| 12 | 2 |  |
| 12 | 4 |  |
| 8 | 4 |  |

2. Complete the missing information. Include units in your answers.

| Distance | Time | Speed |
| :---: | :---: | :---: |
| 5 km | 1 hour |  |
|  | 2 hours | $15 \mathrm{~km} / \mathrm{h}$ |
| 90 miles |  | 15 mph |
| 90 metres |  | $5 \mathrm{~m} / \mathrm{s}$ |
|  | 30 minutes | 30 mph |

## Use and apply the speed formula

3. A lorry travels 90 miles in 2.5 hours.

What is the average speed of the lorry for this journey?
4. Susan runs 3 km at a constant speed of $6 \mathrm{~km} / \mathrm{h}$. She then runs 4.5 km at a constant speed of $3 \mathrm{~km} / \mathrm{h}$.
a) How long did it take her to run the complete 7.5 km ?
b) What is her average speed over the whole run?
5. It take 45 minutes to travel from $A$ to $B$ at a constant speed of 18 km per hour.
a) What is the distance $A B$ ?
b) How long would it take to travel between $A$ and $B$ if you were travelling at $3 \mathrm{~km} / \mathrm{h}$ ?

Answers

## Use and apply the speed formula

1. Work out the speeds to complete the table.

| Distance <br> $(\mathrm{m})$ | Time <br> taken $(\mathrm{s})$ | Speed <br> $(\mathrm{m} / \mathrm{s})$ |
| :---: | :---: | :---: |
| 6 | 1 | 6 |
| 12 | 1 | 12 |
| 12 | 2 | 6 |
| 12 | 4 | 3 |
| 8 | 4 | 2 |

2. Complete the missing information. Include units in your answers.

| Distance | Time | Speed |
| :---: | :---: | :---: |
| 5 km | 1 hour | $5 \mathrm{~km} / \mathrm{h}$ |
| 30 km | 2 hours | $15 \mathrm{~km} / \mathrm{h}$ |
| 90 miles | 6 hours | 15 mph |
| 90 metres | 18 seconds | $5 \mathrm{~m} / \mathrm{s}$ |
| 15 miles | 30 minutes | 30 mph |

## Use and apply the speed formula

3. A lorry travels 90 miles in 2.5 hours.

What is the average speed of the lorry for this journey? 36 mph
4. Susan runs 3 km at a constant speed of $6 \mathrm{~km} / \mathrm{h}$. She then runs 4.5 km at a constant speed of $3 \mathrm{~km} / \mathrm{h}$.
a) How long did it take her to run the complete 7.5 km ? 2 hours
b) What is her average speed over the whole run? 3.75 km/h
5. It take 45 minutes to travel from $A$ to $B$ at a constant speed of 18 km per hour.
a) What is the distance $A B$ ?
13.5 km
b) How long would it take to travel between $A$ and $B$ if you were travelling at $3 \mathrm{~km} / \mathrm{h}$ ?
4.5 hours

