

# Outcome 3 - Calculating Speed

## Bronze example

Examples...

Speed = Distance ÷ Time

A cyclist travelled 72 miles in 8 hours. What was his speed?

Speed =  $72 \div 8 = 9$  m.p.h.

## Silver example

Examples...

Speed = Distance ÷ Time

A plane flies 1200 miles in 3 hours. What is its average speed?

Speed =  $1200 \div 3 = 400$  m.p.h.

## Gold example

Examples...

30 mins = 0.5 hr  
15 mins = 0.25 hr  
45 mins = 0.75 hr

Speed = Distance ÷ Time

A rocket flies 3450 kilometres in 5 hrs 45 mins. What is its average speed?

Speed =  $3450 \div 5.75 = 600$  km/hr

## Bronze Questions

Calculate the following speeds...

- |  |   |
|--|---|
| 1  D = 18 miles<br>T = 2 hours S = ?     | 2  D = 64 kilometres<br>T = 8 hours S = ? |
| 3  D = 60 metres<br>T = 10 seconds S = ? | 4  D = 48 kilometres<br>T = 4 hours S = ? |
| 5  D = 35 miles<br>T = 5 hours S = ?     | 6  T = 6 hours<br>D = 36 miles S = ?      |
| 7  D = 25 metres<br>T = 5 seconds S = ?  | 8  T = 9 hours<br>D = 54 miles S = ?      |
| 9  D = 48 miles<br>T = 6 hours S = ?     | 10  T = 8 hours<br>D = 96 miles S = ?     |

## Silver Questions

Calculate the following speeds...

- |   |   |
|---|---|
| 1  D = 210 miles<br>T = 3 hours S = ?       | 2  D = 560 kilometres<br>T = 8 hours S = ?  |
| 3  D = 3600 metres<br>T = 6 seconds S = ?   | 4  D = 1800 miles<br>T = 2 hours S = ?      |
| 5  D = 4500 miles<br>T = 90 hours S = ?     | 6  D = 1200 miles<br>T = 300 hours S = ?    |
| 7  D = 80 000 metres<br>T = 8 seconds S = ? | 8  D = 66 000 metres<br>T = 6 seconds S = ? |
| 9  D = 48 000 miles<br>T = 60 hours S = ?   | 10  D = 81 000 miles<br>T = 900 hours S = ? |

## Gold Questions

Calculate the following speeds...

- |  |  |
|--|--|
| 1  D = 60 miles.<br>T = 1 hr 15 mins S = ?     | 2  D = 50 kilometres<br>T = 2 hrs 30 mins S = ?      |
| 3  D = 2250 miles<br>T = 3 hrs 45 mins S = ?   | 4  D = 375 kilometres<br>T = 7 hrs 30 mins S = ?     |
| 5  D = 2475 miles<br>T = 8 hr 15 mins S = ?    | 6  D = 405 miles<br>T = 6 hrs 45 mins S = ?          |
| 7  D = 760 miles<br>T = 9 hrs 30 mins S = ?    | 8  D = 170 miles<br>T = 4 hrs 15 mins S = ?          |
| 9  D = 316.25 miles<br>T = 5 hrs 45 mins S = ? | 10  D = 471.25 kilometres<br>T = 7 hrs 15 mins S = ? |



## Bronze Answers

- |    |          |     |           |
|----|----------|-----|-----------|
| 1. | 9 m.p.h. | 2.  | 8 km/hr   |
| 3. | 6 m/sec  | 4.  | 12 km/hr  |
| 5. | 7 m.p.h. | 6.  | 6 m.p.h.  |
| 7. | 5 m/sec  | 8.  | 6 m.p.h.  |
| 9. | 8 m.p.h. | 10. | 12 m.p.h. |

## Silver Answers

- |    |              |     |              |
|----|--------------|-----|--------------|
| 1. | 70 m.p.h.    | 2.  | 70 km/hr     |
| 3. | 600 m/sec    | 4.  | 900 m.p.h.   |
| 5. | 50 m.p.h.    | 6.  | 4 m.p.h.     |
| 7. | 10 000 m/sec | 8.  | 11 000 m/sec |
| 9. | 800 m.p.h.   | 10. | 90 m.p.h.    |

## Gold Answers

- |    |            |     |           |
|----|------------|-----|-----------|
| 1. | 48 m.p.h.  | 2.  | 20 km/hr  |
| 3. | 600 m.p.h. | 4.  | 50 km/hr  |
| 5. | 300 m.p.h. | 6.  | 60 m.p.h. |
| 7. | 80 m.p.h.  | 8.  | 40 m.p.h. |
| 9. | 55 m.p.h.  | 10. | 65 m.p.h. |