

## COMPOUND MEASURES: SPEED CONVERSION

### Best Guess Mastery Worksheet (Target Grade 4/5)

#### I Do

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Change a speed of 90 kilometres per hour to a speed in metres per second.

Show your working clearly.

#### We Do

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Change a speed of 72 kilometres per hour to a speed in metres per second.

Show your working clearly.

**COMPOUND MEASURES: SPEED CONVERSION****Best Guess Mastery Worksheet (Target Grade 4/5)****You Do 1**

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Change a speed of 108 kilometres per hour to a speed in metres per second.

Show your working clearly.

**You Do 2**

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Change a speed of 54 kilometres per hour to a speed in metres per second.

Show your working clearly.

**COMPOUND MEASURES: SPEED CONVERSION**

**Best Guess Mastery Worksheet (Target Grade 4/5)**

**Challenge 1**

Change a speed of 15 metres per second to a speed in kilometres per hour.  
Show your working clearly.

**Challenge 2**

Change a speed of 25 metres per second to a speed in kilometres per hour.  
Show your working clearly.

## **Answers & Worked Solutions**

### **I Do:**

90 km = 90,000 metres.

1 hour = 3,600 seconds.

Speed =  $90,000 \div 3,600 = 25 \text{ m/s}$

*(Alternatively, divide by 3.6:  $90 \div 3.6 = 25$ )*

### **We Do:**

72 km = 72,000 metres.

1 hour = 3,600 seconds.

Speed =  $72,000 \div 3,600 = 20 \text{ m/s}$

*(Alternatively, divide by 3.6:  $72 \div 3.6 = 20$ )*

### **You Do 1:**

108 km = 108,000 metres.

1 hour = 3,600 seconds.

Speed =  $108,000 \div 3,600 = 30 \text{ m/s}$

*(Alternatively, divide by 3.6:  $108 \div 3.6 = 30$ )*

### **You Do 2:**

54 km = 54,000 metres.

1 hour = 3,600 seconds.

Speed =  $54,000 \div 3,600 = 15 \text{ m/s}$

*(Alternatively, divide by 3.6:  $54 \div 3.6 = 15$ )*

### **Challenge 1:**

15 metres in 1 second =  $15 \times 3,600$  metres in 1 hour = 54,000 metres per hour.

54,000 m = 54 km.

Speed = **54 km/h**

*(Alternatively, multiply by 3.6:  $15 \times 3.6 = 54$ )*

### **Challenge 2:**

25 metres in 1 second =  $25 \times 3,600$  metres in 1 hour = 90,000 metres per hour.

90,000 m = 90 km.

Speed = **90 km/h**

*(Alternatively, multiply by 3.6:  $25 \times 3.6 = 90$ )*