

### Vectors and Scalars:

Define scalar:

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Give 2 examples of scalar quantities:

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Define vector:

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Give 2 examples of vector quantities

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Give a pair of quantities where one is a vector and the other a scalar

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What is meant by the term 'displacement'

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Draw a diagram to show an example of displacement.

### Distance-Time Graphs

What is the equation that links time, speed and distance?

What are the units of speed? .....

An object travels 10m in 2 seconds. Calculate the speed.

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How far would ThrustSSC travel in 5 seconds if the speed was 341m/s?

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What does a horizontal line represent on a distance time graph?

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Calculate the speed in the first 20 seconds.

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### Acceleration:

What is the equation that links the change in velocity, acceleration and time?

What are the units of acceleration?.....

An object accelerates from 10m/s to 20m/s in 5 seconds. Calculate the acceleration.

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A car slows down from 30m/s to 10m/s in 4 seconds. Calculate the acceleration.

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Acceleration can be linked to initial velocity, final velocity and distance:

$$v^2 - u^2 = 2 \times a \times x$$

Rearrange the equation to calculate distance (x)

What is the acceleration due to gravity?

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### Motion:

### Velocity-Time Graphs

What does a sloping line represent on a velocity-time graph?

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What does a horizontal line represent on a velocity-time graph?

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How do you calculate the distance travelled on a sloped part of the graph?

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How do you calculate the distance travelled on a horizontal part of the graph?

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### Velocity-Time Graphs

Calculate the distance travelled:

**Part A**

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**Part B**

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**Part C**

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