

Velocity time graphs

All answers to calculations should be to 2 significant figures.

1. What does the gradient of a velocity time graph represent?

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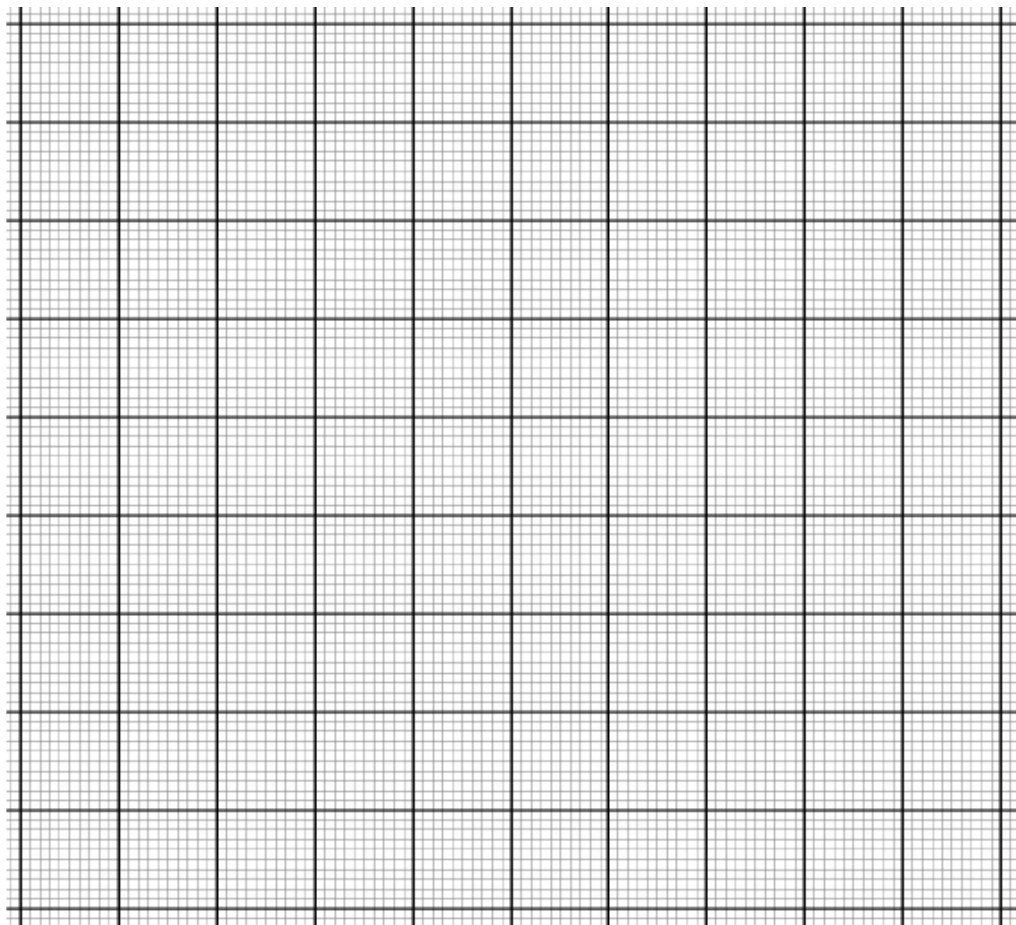
2. What does the area under the graph line of a velocity time graph represent?

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3. Nicola used a motion sensor and data logger to collect the time and velocity of a toy car rolling down wooden ramp, which is written in the table below.

Time(s)	0	1	2	3	4	5	6	7	8
Velocity (m/s)	0	23	39	54	64	70	75	80	80

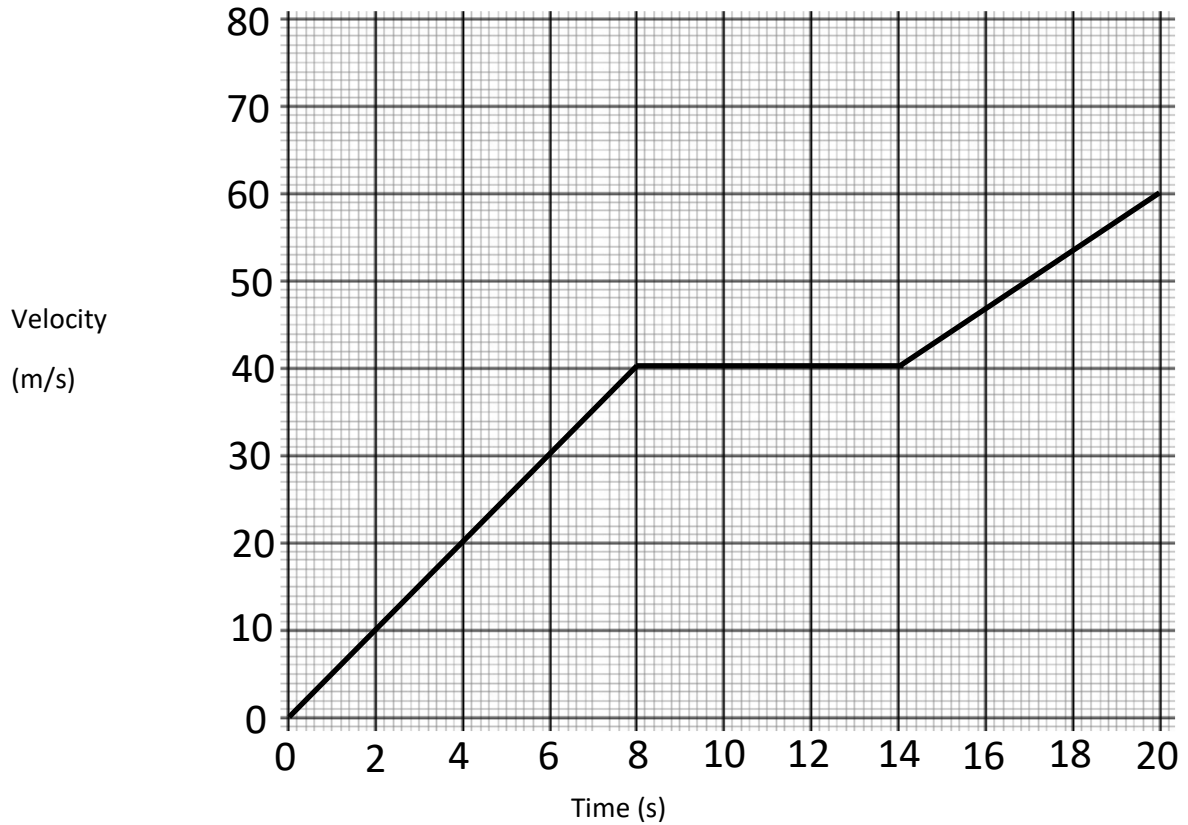
Using the data above, plot the graph on the paper below



3a. Using the graph above calculate the acceleration of the object at 4 seconds. Remember to show your workings on the graph.

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4. Using the velocity time graph below answer the following questions.



4a. Calculate the acceleration of the object between 0 to 8 seconds.

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4b. How far does the object move between 0 to 14 seconds

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4c. Calculate the average velocity between 14 and 20 seconds

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4d. On the graph above sketch a graph line between 0 to 10 seconds for an object that has a uniform acceleration of 8m/s^2 . Label this line A.