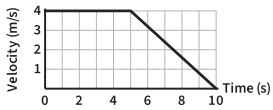
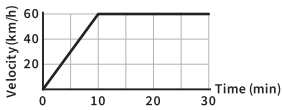
Gradients and Areas Under Graphs *ramp up*

a Find the area enclosed by $y = x + 2$, the x axis and $x = 4$

b Find the average speed



c Find the distance in km



d The area under $y = x + c$ from $x = 0$ to $x = 6$ is 30. Find c.

e Use 4 strips to estimate the area under $y = x^2$ from $x = 0$ to $x = 2$

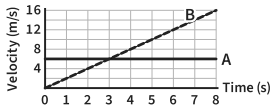
f Use 4 strips to estimate the area between $y = -x^2 + 4x$ and the x axis

g Explain why the trapezium rule gives the exact area under $y = 3x + 1$

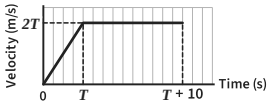
h $y = \sqrt{(16 - x^2)}$. Find an exact 2 strip estimate of the area from 0 to 4.

i $y = 2^x$. Is a 4 strip estimate of the area from 0 to 2 less than a 2 strip one?

j When has B gone as far as A?



k The distance is 96 m. Find T.



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The Maths Habit

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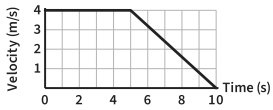

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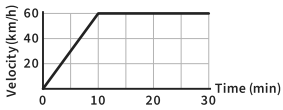

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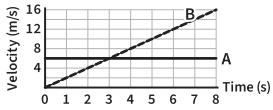

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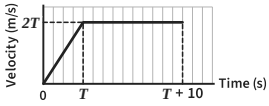

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