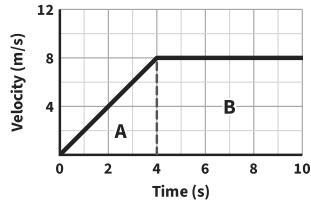


Area Under a Graph

1 area under the graph = distance

Find the distance travelled.

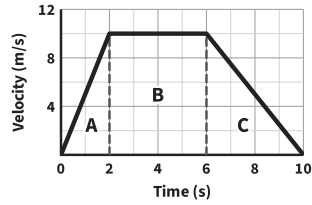


A = $\frac{1}{2} \times 4 \times 8 = 16$

B =

Distance _____ m

2 Find the distance travelled.



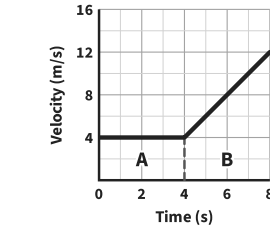
A = $\frac{1}{2} \times 2 \times 10 = 10$

B =

C =

Distance _____ m

3 Find the distance travelled.

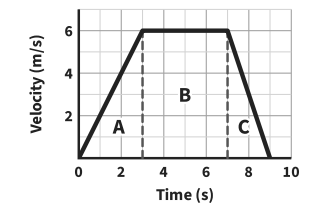


A = $4 \times 4 = 16$

B =

Distance _____ m

4 Find the distance travelled.



A = $\frac{1}{2} \times 3 \times 6 = 9$

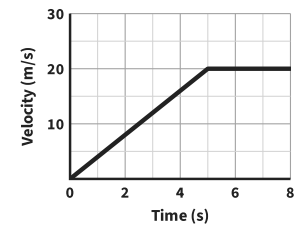
B =

C =

Distance _____ m

5 Notice the change!

Find the distance travelled. Split the area into shapes first.

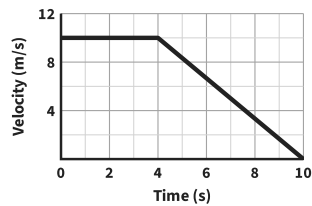


A =

B =

Distance _____ m

6 Find the distance travelled. Split the area into shapes first.

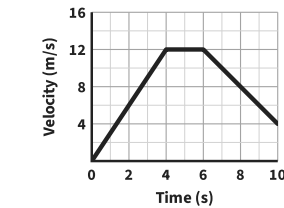


A =

B =

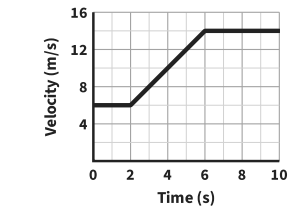
Distance _____ m

7 Find the distance travelled.



Distance _____ m

8 Find the distance travelled.

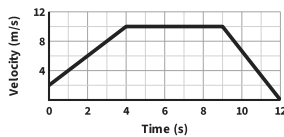


Distance _____ m

Area Under a Graph further practice

9

Find the distance travelled.



Answer _____

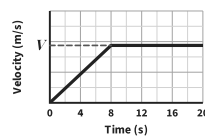
10

A cyclist speeds up steadily from rest to 8 m/s in 5 seconds. She rides at 8 m/s for 20 seconds, then slows down steadily and stops 4 seconds later. How far does she travel?

Answer _____

11

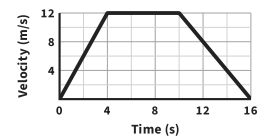
A runner travels 120 m in 20 seconds. Find her top speed, V m/s.



Answer _____

12

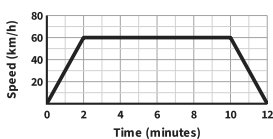
The graph shows a scooter's journey. Find its average speed for the whole journey.



Answer _____

13

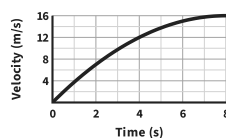
The graph shows a train's journey between two stations. How far apart are the stations? Give your answer in km.



Answer _____

14

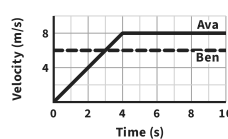
Estimate the distance travelled in the first 8 seconds. Split the area into 4 strips of equal width.



Answer _____

15

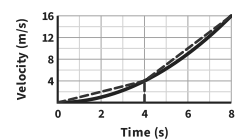
Ava and Ben start a race together. The graph shows their speeds. How long does it take Ava to catch up with Ben?



Answer _____

16

Lena estimates the distance travelled in 8 seconds with the two trapezia shown. Is her estimate too big or too small? Explain.



Answer _____