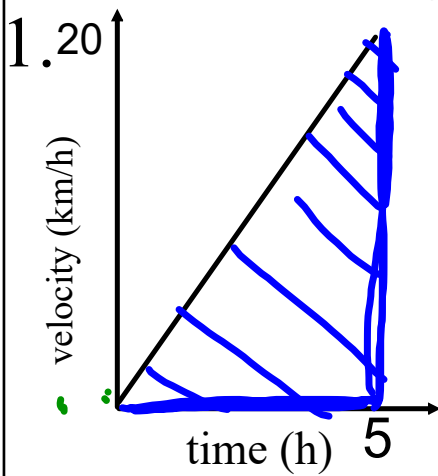


Dec 12, 2019

!!!!Reminder Test Tuesday on Chp 10!!!!

Warm-Up

Calculate the distance and acceleration for the following:



$$\begin{aligned}
 a &= \frac{v_f - v_i}{t_2 - t_1} \\
 &= \frac{20\text{km/h} - 0\text{km/h}}{5\text{h} - 0\text{h}} \\
 &= \frac{20\text{km/h}}{5\text{h}} \\
 &= 4\text{km/h}^2
 \end{aligned}$$

$$\begin{aligned}
 d &= \frac{vt}{2} \\
 &= \frac{(20)(5)}{2} \\
 &= 50\text{km}
 \end{aligned}$$



Answers pg 393 #4b,5b,6c

4b) the area under the graph of a speed time graph communicates the distance travelled.

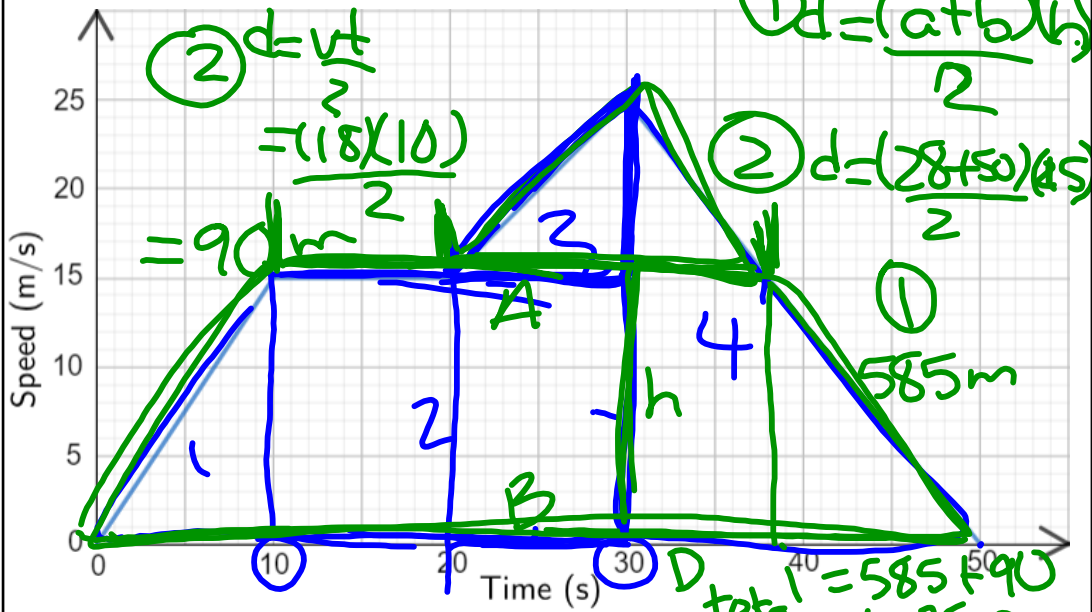
$$5b) \text{ Distance (Cathryn)} = \frac{vt}{2} = \frac{(6\text{m/s})(100\text{s})}{2} = 300\text{m}$$

$$\text{Distance (Keir)} = \frac{vt}{2} = \frac{(4\text{m/s})(100\text{s})}{2} = 200\text{m}$$

$$6c) \text{ Distance (Cheetah)} = \frac{vt}{2} = \frac{(20\text{m/s})(2\text{s})}{2} = 20\text{m}$$

Example:

Bicycle Trip



Calculate the total distance travelled by the bicycle.

$$\textcircled{1} d = \frac{vt}{2}$$

$$d = \frac{(15)(10)}{2}$$

$$\therefore 75\text{m}$$

$$\textcircled{2} d = vt$$

$$= (15)(20)$$

$$= 300$$

$$\textcircled{3} d = \frac{vt}{2}$$

$$= \frac{(10)(15)}{2}$$

$$= 50$$

$$\textcircled{4} d = \frac{vt}{2}$$

$$= \frac{(25)(20)}{2}$$

$$= 250\text{m}$$

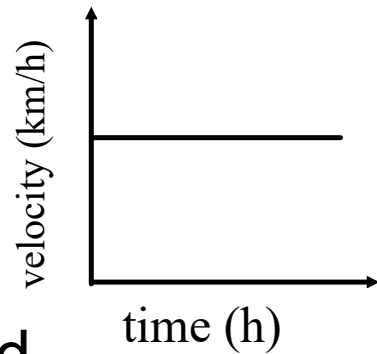
$$D_{\text{total}} = D_1 + D_2 + D_3 + D_4$$

$$= 75 + 300 + 250 + 50$$

$$= 675\text{m}$$

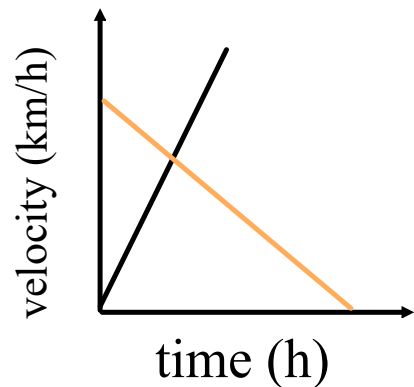
Review Finding Distance/Acceleration

If shape is a square
(acceleration zero) use:
 $D = v \times t$



If shape is a triangle (speed
increasing or decreasing)
use:

$$D = \frac{v \times t}{2}$$



If finding the acceleration find the slope of the line
by using the formula

$$a = \frac{v_f - v_i}{t_2 - t_1}$$

Complete Graphing Acceleration and Calculating Distance WS