

# MTV Worksheet

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Name: \_\_\_\_\_

(Show work)

1. What do the following variables stand for?
  - a.  $\Delta d =$  \_\_\_\_\_
  - b.  $\Delta t =$  \_\_\_\_\_
  - c.  $\Delta v =$  \_\_\_\_\_
  - d.  $\Delta a =$  \_\_\_\_\_

2. What are the equations for...
  - a. Average velocity

b. Average acceleration

c. Percent Error

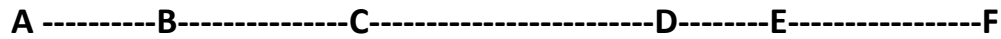
3. Manipulate the velocity equation to solve for...
  - a. Time

b. Distance final

4. Manipulate the acceleration equation to solve for...
  - a. Time

- b. Velocity initial

5. Find the average velocity for using the information given below.



A to B is 10 km  
D to E is 8 km

B to C is 15 km  
E to F is 17 km

C to D is 25 km

- a) A car travels from A to C in 1 hr and 20 minutes
  
  
  
  
  
  
  
  
  
  
  - b) A car travels from C to F in 2 hrs and 45 minutes.
  
  
  
  
  
  
  
  
  
  
  - c) An object travels from B to E in 35 minutes
  
  
6. What is the average velocity (in m/s) for a person running 13.25 km in 2.5 hours?
  
  
  
  
  
  
  
  
  
  
7. A person is running 5.6 m/s for 22 minutes. How far (in m) did this person run?

8. If you run with an average velocity of 3.4 m/s for 5 minutes, how far will you travel (in m)?
9. A car speeds up from 8 km/h to 20 km/h in 15 minutes. What is the acceleration of the car?
10. A car comes to a stop in 5 seconds. What is the cars initial velocity if the cars acceleration was  $-6 \text{ m/s}^2$ ?
11. A car is moving at 26 m/s over a 2 minute time period. What is the cars acceleration?
12. An object is moving with a speed of 3.5 m/s and accelerates to 12.4 m/s. If the object had an acceleration of  $0.9 \text{ m/s}^2$ , how long did the object accelerate?

13. An object is moving with a speed of 12 km/h and accelerates to 45 km/h. What is the average acceleration for the object if it took 2 minutes to reach its final speed?

14. What is the percent error for the following? (Show work in box)

Estimated Number	Actual Number	% Error
45.5	45	
123	123.2	
10000	9655	
8.6	9.22	

15. You measure the length of a stick and record a measurement of 45 cm. The actual length of the stick is 46 cm, what is your percent error?

16. You estimate the time it will take you to run a distance to be 1 minute and 4 seconds. What is your percent error if it takes you 1 minute and 15 seconds? 1 minutes and 3 seconds?