

Section D: The Speed Formula

Unit: One-Dimensional Kinematics

Level 1

Prerequisites: none

Points to:

$$d = vt$$

Objectives:

- Be able to solve this formula for d , v and t .
- Always write the appropriate units for distance, speed, and time.

$$\text{distance} = \text{speed} * \text{time}$$

$$d = vt$$

Symbol	Quantity	SI Unit	
d	Distance	Meters	
v	Average Speed	Meters per second	Note: even though it is a v , this is speed, not velocity. We will learn the difference later.
t	Time	seconds	

A.1 You walk a distance of 6 meters down the hall, in a time of 2 seconds. What is your speed?

Looking For	Formula	
Already Know		
Answer in a complete sentence <i>with unit</i> :		

A.2 You walk a distance of 12 m in a time of 3 s. What is your speed?

Looking For	Formula	
Already Know		
Answer in a complete sentence <i>with unit</i> :		

A.3 You drive a distance of 140 m in a time of 20 s. What is your speed?

(Note: Sometimes, I won't give you the table, I still expect you to write all of the information you would include in the table.)

A.4 You move at a speed of 3 m/s for a time of 10 seconds. What is your distance?

Looking For	Formula	
Already Know		
Answer in a complete sentence <i>with unit</i> :		

A.5 You move at a speed of 4 m/s for a time of 20 s. What is your distance?

Looking For	Formula	
Already Know		
Answer in a complete sentence <i>with unit</i> :		

A.6 You drive a distance of 200 m at a speed of 40 m/s. How much time does it take?

Looking For	Formula	
Already Know		
Answer in a complete sentence <i>with unit</i> :		

A.7 You move a distance of 32 m with a speed of 4 m/s. How much time does it take?

Looking For	Formula	
Already Know		
Answer in a complete sentence <i>with unit</i> :		

A.8 You move a distance of 30 m in a time of 15 s. What is your speed?

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Name _____

A.1 $v = 3 \text{ m/s}$

A.2 $v = 4 \text{ m/s}$

A.3 $v = 7 \text{ m/s}$

A.4 $d = 30 \text{ m}$

A.5 $d = 80 \text{ m}$

A.6 $t = 5 \text{ s}$

A.7 $t = 8 \text{ s}$

A.8 $v = 2 \text{ m/s}$