

Section A: 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?

## Section A: The Speed Formula

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**  $v = 2 \text{ m/s}$