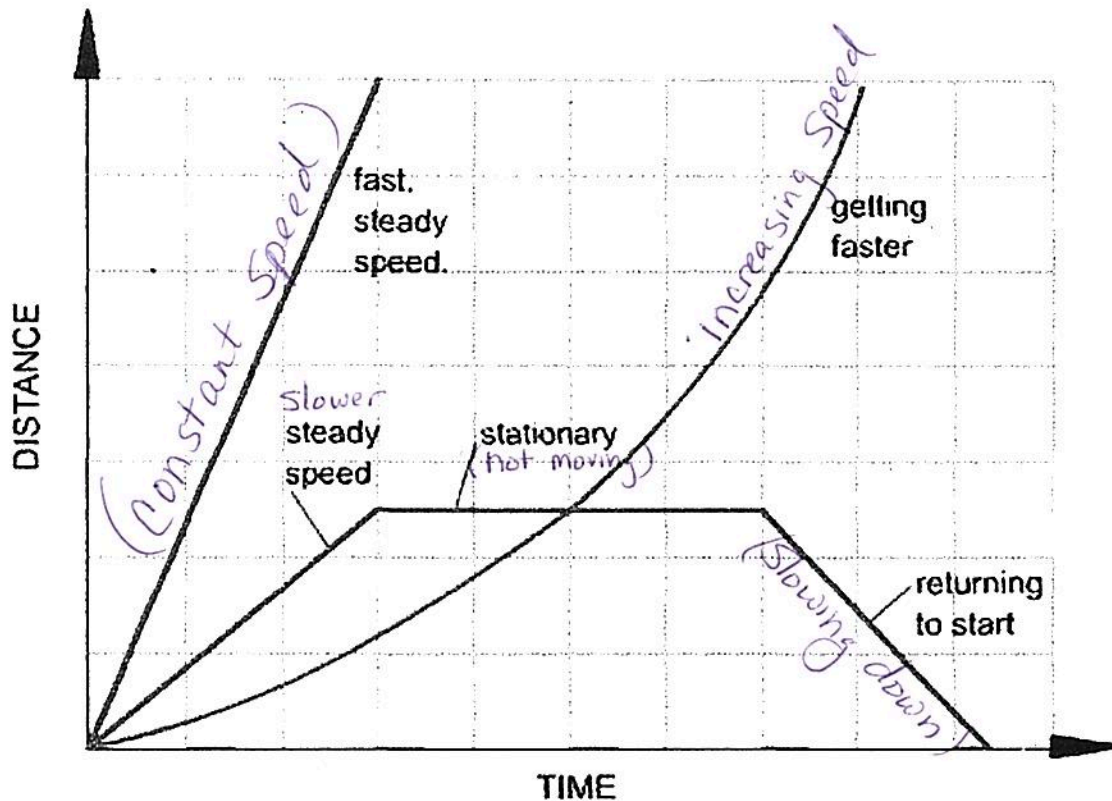


NAME: _____

DATE: 10-9-18

PERIOD: _____

Graphing Motion

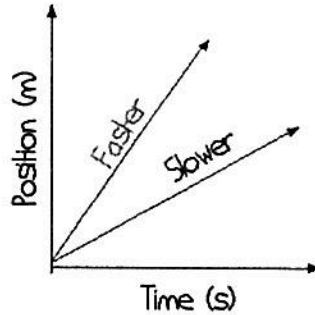


Distance/Time Graph:

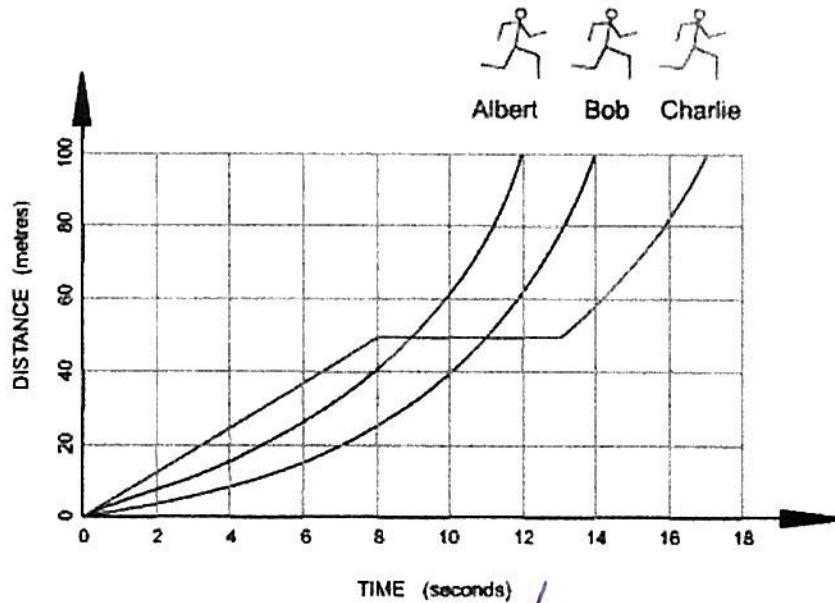
- Flat, horizontal line = no motion (stopped)
- Straight line sloping upward = constant speed away from start
- Straight line sloping downward = constant speed towards start
- Curved line = changing speed (acceleration)

Slope:

- The steepness of a graph line; the ratio of the vertical change (the rise) to the horizontal change (the run).
- A bigger slope means a steeper line which means a faster speed.



Let's Practice: Albert, Bob and Charlie are running a race. Use the graph below to answer the following questions.



1. Which runner won the race?
2. Which runner stopped for a rest?
3. How long did he stop for?
4. How long did Bob take to complete the race?
5. Calculate Albert's average speed.

Albert

Charlie

5 seconds

14 seconds

$$S = \frac{d}{T}$$

$$S = \frac{100\text{m}}{12\text{s}}$$

$$S = 8.3\text{ m/s}$$

Name: _____

Date: _____

Period: _____

Speed Practice Problems Worksheet

Directions: Solve the following speed practice problems.



1. A car travels 300 km in 6 hours. What is the average speed of the car (in km/hr)?

Formula	$S = \frac{d}{t}$
Substitution	$S = \frac{300 \text{ km}}{6 \text{ hrs}}$
Final Answer with Units	$S = 50 \text{ km/hr}$

2. What is the speed of a jet plane that flies 7200 km in 9 hours (in km/hr)?

Formula	$S = \frac{d}{t}$
Substitution	$S = \frac{7200 \text{ km}}{9 \text{ hrs}}$
Final Answer with Units	$S = 800 \text{ km/hr}$

3. A storm is moving toward your house at a speed of 20 km/hr. It is now 60 km away from your house. In what time will the storm reach your house?

Formula	$t = \frac{d}{s}$
Substitution	$t = \frac{60 \text{ km}}{20 \text{ km/hr}}$
Final Answer with Units	$t = 3 \text{ hr}$

4. A swimmer can swim at a speed of 2.8 m/s for 360 seconds. What distance will she cover in that time?

Formula	$D = S \cdot t$
Substitution	$D = 2.8 \text{ m/s} \cdot 360 \text{ s}$
Final Answer with Units	$D = 1008 \text{ m}$