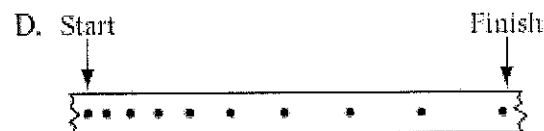
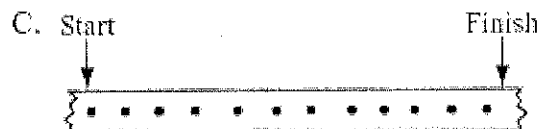
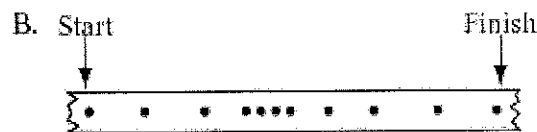


Name: _____ Block: _____ Date: _____

Motion and Vector Practice Problems

- 1 A car has an oil drip. As the car moves, it drips oil at a regular rate, leaving a trail of spots on the road.

Which of the following diagrams of the car's trail of spots shows the car continuously slowing down?

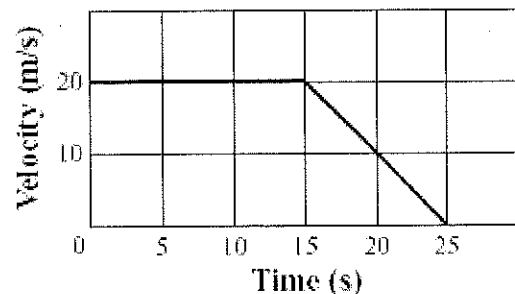


- 2 Which of the following is an example of a vector quantity?

- A. A student walks 2.0 km north.
- B. An object has a mass of 10.5 kg.
- C. A 1.0 kg object moves at 18 m/s.
- D. A ball has an instantaneous speed of 15 m/s.

- 3 The graph below shows velocity measurements made as a car moved north for 25 s.

Motion of a Car



How far did the car move during the first 15 s of the trip?

- A. 20 m
- B. 25 m
- C. 300 m
- D. 500 m

- 4 What is the acceleration of the car from 15 s to 25 s?

- A. 20 m/s^2
- B. 2 m/s^2
- C. 0 m/s^2
- D. -2 m/s^2

5 An elevator in an office building completed the following trips:

- 1st floor to 8th floor
- 8th floor to 4th floor
- 4th floor to 13th floor

The distance between each floor of the office building is 3.0 m.

Which table shows the total distance traveled and displacement of the elevator?

A.

Distance	Displacement
33 m	60 m

B.

Distance	Displacement
60 m	36 m

C.

Distance	Displacement
36 m	60 m

D.

Distance	Displacement
60 m	60 m

6 Which of the following will always change when an object accelerates?

- A. mass
- B. potential energy
- C. velocity
- D. weight

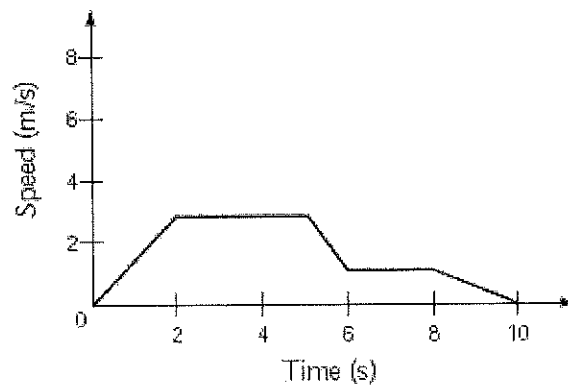
7 The table below shows the time it takes four cars to go from 0 to 60 km/h.

Car	Time (s)
1	2.5
2	4.2
3	5.2
4	3.3

Based on the information given, which of the following quantities can be compared for the four cars?

- A. average acceleration
- B. instantaneous speed
- C. stopping distance
- D. stopping time

8 The graph below shows the speed of an object during a 10 s time interval.



In which of the following time intervals is the speed of the object decreasing?

- A. between 0 s and 2 s
- B. between 2 s and 4 s
- C. between 6 s and 8 s
- D. between 8 s and 10 s