CHAPTER 11.1-11.2 MOTION | Review

QUESTION 1

When an object covers equal distances in equal amounts of time, it is moving at a(n)

_____.

ANSWER 1

Constant speed

QUESTION 2

What is the SI unit for acceleration?

ANSWER 2

m/s^2 or km/hr^2

QUESTION 3

A space shuttle travels in orbit at 21,000 km/hr. How far will it travel after 5 hr?

ANSWER 3

100,000 km

QUESTION 4

I traveled 1025 km from El Paso to Dallas in 13.5 hr. What was its average velocity?
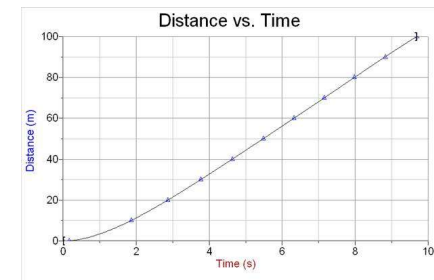
ANSWER 4

75.9 km/hr toward Dallas

QUESTION 5

A driver starts his parked car and within 5 s reaches a velocity of 54 m/s as he travels east. What is his acceleration?
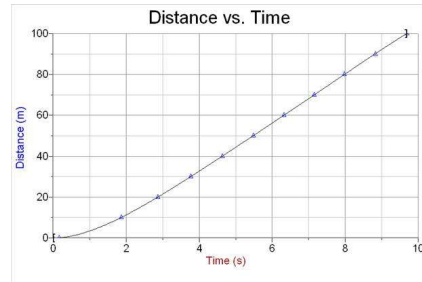
ANSWER 5

10 m/s^2

QUESTION 6

What is the distance of the object at 8 seconds?

ANSWER 6

80 m

QUESTION 7

A student practices for a track meet ran 250 m in 30 sec. The following day she ran 300 m in 30 sec. What was her average speed?

ANSWER 7

9 m/s

QUESTION 8

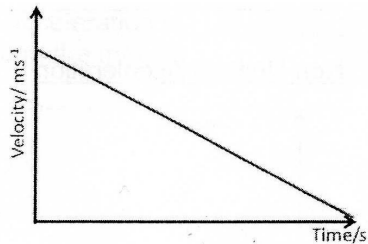What are all the ways to cause acceleration?

ANSWER 8

1. Decrease velocity
2. Increase velocity
3. Change direction

QUESTION 9

Draw a graph depicting negative acceleration. You have to label the graph correctly.

ANSWER 9

QUESTION 10

Identify each measurement below as that of distance, speed, velocity, or acceleration.

A. _____ 32 ft/min^2 G. _____ 68 m/s^2

B. _____ 15 m   H. _____ 1.32 x 10^{-7} m

C. _____ 68 km/h

D. _____ 1.5 cm

E. _____ 2.8 m/s east

F. _____ 12 cm/s

ANSWER 10

A. acceleration

B. distance

C. speed

D. distance

E. velocity

F. speed

G acceleration

H. distance

QUESTION 11

Acceleration can be determined from a velocity vs. time graph by calculating the line's _____.

ANSWER 11

Slope

QUESTION 12

When an object changes position, what does frame of reference show about the object?

ANSWER 12

motion

QUESTION 13

Sandy is driving when she notices a police officer. She slows her car from in 90.0 m/s to 62 m/s in 6.2 s. What is the car's acceleration?

ANSWER 13

-4.5 m/s^2

QUESTION 14   HARDER PROBLEM

A cyclist travels at a constant velocity of 4.5 m/s westward and then speeds up with a steady acceleration of 2.3 m/s^2. Calculate the cyclists speed after accelerating for 5.0s.
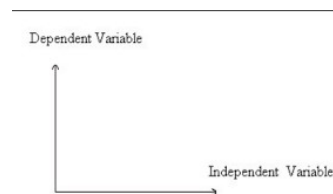
ANSWER 14

$$V_f = V_i + at$$

16 m/s

QUESTION 15

What are the two types of variables found on a graph?

ANSWER 15

Dependent variable
Independent variable

Dependent Variable

Independent Variable

QUESTION 16

What is used to determine if an object has moved?

ANSWER 16

It's frame of reference

QUESTION 17

What objects can be used as a frame of reference in the picture to show that motion is occurring?

ANSWER 17

The Bus Stop Sign or the girl stand by the bus stop sign.

QUESTION 18

To show that displacement has occurred, what information is needed?

ANSWER18

It's direction

QUESTION 19

1. What is the major difference between speed and velocity?

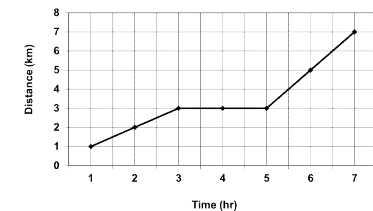2. What formula is used to determine speed and velocity?

ANSWER 19

1. Velocity has a direction, speed doesn't

2. Both speed and velocity use the same formula. S=d/t
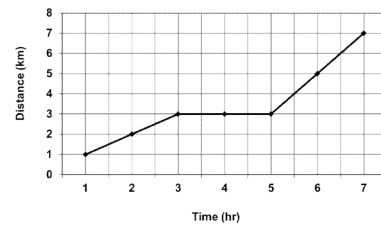
QUESTION 20

Use the graph to answer the following questions.

Describe the motion of the object between 3hrs to 5 hrs.
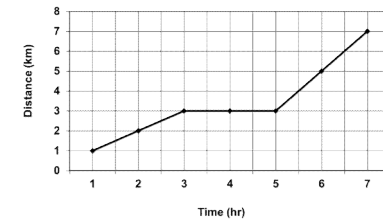
ANSWER 20

The object was not moving.

QUESTION 21

Use the graph to answer the following question.

What is the speed of the object between hour 5 and hour 7?

ANSWER 21

Speed= Slope

Slope=Rise/Run

Slope=(7 km -3 km)/(7 hr -5 hr)

Slope=4 km/ 2 hr

Answer= 2 km/hr