

# Kinematic Equations Review

⚠ This is a preview of the published version of the quiz

Started: Oct 16 at 11:48am

## Quiz Instructions

Do not type in the units. Round your answer to one decimal place.

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### Question 1

1 pts

An object dropped from rest on planet earth ( $g=10 \text{ m/s}^2$ ) travels 50 meters. What is the speed of the object after falling those 50 meters?

### Question 2

1 pts

An object with initial speed of 8 m/s accelerates uniformly at 5 m/s/s for a distance of 120 meters. What is the final speed of the object after the 120 meters?

### Question 3

1 pts

A skier starts from rest and skis down a hill side of length 500 meters in 50 seconds. What is the average acceleration magnitude of the skier?

**Question 4****1 pts**

A ball is thrown straight down with an initial velocity of 13 m/s. Assume  $g = 10 \text{ m/s}^2$ . What is the speed of the ball after 10 seconds?

**Question 5****1 pts**

An astronaut on Planet Z drops a hammer initially at rest a distance of 300 meters. It takes the hammer 20 seconds to hit the ground. What is the acceleration magnitude on Planet Z?

**Question 6****1 pts**

An object with mass 400 kg is dropped on a Planet K which has no atmosphere and an acceleration of gravity  $6.5 \text{ m/s}^2$ . What is the velocity of the object after 10 seconds if dropped from rest after?

**Question 7****1 pts**

An object on Planet K with acceleration of  $6.5 \text{ m/s}^2$  and no atmosphere is dropped for 30 seconds. Assume initial velocity is zero. How far will the object travel in those 30 seconds?

**Question 8****1 pts**

An object has initial velocity 20 m/s and reaches a velocity of 40 m/s in a time of 6 seconds. What is the average velocity of the object?

**Question 9****1 pts**

An object has initial velocity 20 m/s and reaches a velocity of 40 m/s in a time of 5 seconds. What is the average acceleration of the object?

**Question 10****1 pts**

The shape of the v-t graph for a uniformly (aka constantly) accelerating object is a diagonal.

- True
- False

**Question 11****1 pts**

The shape of the x-t graph for a uniformly (aka constantly) accelerating object is a curve.

- True
- False

**Question 12****1 pts**

The shape of the distance-time graph for a uniformly (aka constantly) accelerating object is a curve.

- True
- False

**Question 13****1 pts**

Objects in free fall are not uniformly accelerating.

- True
- False

**Question 14****1 pts**

An object in free fall on planet earth always experiences an acceleration downward of 10 m/s/s even if the object has a non-zero initial velocity upward.

- True
- False

**Question 15****1 pts**

The slope of the velocity-time graph is the acceleration.

- True
- False

**Question 16****1 pts**

An object uniformly accelerates from 15 m/s to 30 m/s in 3 seconds. What is the distance traveled by the object in those 3 seconds?

hint:

Start by finding the acceleration.

Not saved

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