# Acceleration Homework 1

This is a preview of the draft version of the quiz

Started: Sep 3 at 1:54pm

# Quiz Instructions

## Question 1 — 1 pts

As discussed in class, a 'quick' car is one that can achieve very high speeds.

- ◯ True
- ◯ False

## Question 2 — 1 pts

As discussed in class, a 'fast' car is one that can change speeds at a high rate.

- ◯ True
- ◯ False

## Question 3 — 1 pts

A car begins traveling at 7 m/s and accelerates to 37 m/s in 10 seconds. What was its acceleration in m/s/s?

## Question 4

1 pts

A car begins traveling at 37 m/s and accelerates to 7 m/s in 10 seconds. What was its acceleration in m/s/s?

## Question 5

1 pts

A car begins traveling at 17 m/s and accelerates at +2 m/s/s for 10 seconds. What is its final velocity in m/s?

## Question 6

1 pts

A car begins traveling at 17 m/s and accelerates at -2 m/s/s for 10 seconds. What is its final velocity in m/s?

## Question 7

1 pts

A car begins traveling at -14 m/s and accelerates at +2 m/s/s for 10 seconds. What is its final velocity in m/s?

## Question 8

1 pts

A car begins traveling at -8 m/s and accelerates at -2 m/s/s for 10 seconds. What is its final velocity in m/s?

## Question 9

1 pts

Acceleration is a vector.

- ◯ True
- ◯ False

## Question 10

1 pts

Acceleration can only be positive.

- ◯ True
- ◯ False

## Question 11

1 pts

A car can maximally accelerate at 20 m/s/s. What is the minimum time in seconds for the car to go from 0 m/s to 90 m/s?

## Question 12

1 pts

A car can maximally accelerate at 20 m/s/s. What is the minimum time in seconds for the car to go from 10 m/s to 50 m/s?

## Question 13

1 pts

A car can maximally accelerate during breaking at -15 m/s/s. What is the minimum time in seconds for the car to go from 100 m/s to 10 m/s?

## Question 14

1 pts

It is possible for a human to accelerate quicker than a car.

- ◯ True
- ◯ False

## Question 15

1 pts

A car can maximally accelerate at 25 m/s/s. If the car maximally accelerates to +50 m/s in 4 seconds, what was its initial velocity in m/s?

## Question 16

1 pts

A car can maximally accelerate at +5 m/s/s. If the car maximally accelerates to -40 m/s in 5 seconds, what was its initial velocity in m/s?

## Question 17

1 pts

A car can maximally accelerate at +15 m/s/s. If the car maximally accelerates to +60 m/s in 3 seconds, what was its initial velocity in m/s?

## Question 18

1 pts

A car can maximally accelerate at -30 m/s/s during breaking. If the car maximally accelerates to +50 m/s in 3 seconds, what was its initial velocity in m/s?

## Question 19

1 pts

According to the power to weight ratio that was discussed in class, if you double the overall force on a car, its acceleration will _____.

- ◯ become 1/2
- ◯ become 1/3
- ◯ triple
- ◯ double

## Question 20

1 pts

According to the power to weight ratio that was discussed in class, if you reduce the overall mass of a car by 1/3 its acceleration will _____.

- ◯ triple
- ◯ become 1/2
- ◯ double
- ◯ become 1/3

Quiz saved at 1:55pm

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