



Name _____ Class _____ Date _____

1 Match the term with the correct definition.

1st law of motion A. a moving object tends to stay in motion unless acted upon by an unbalanced force

2nd law of motion B. for every action, there is an equal and opposite reaction

3rd law of motion C. acceleration of an object depends on mass and the net force affecting it

law of universal gravitation

2 Match the term with the correct definition.

gravity A. tendency of an object to resist change once in motion

inertia B. force of attraction that pulls objects toward each other

friction C. force of resistance between two objects in contact

acceleration

3 Using the formula below, determine **how many seconds** it would take for a satellite traveling at **4 miles per second** to travel _____

4 Match the term with the correct definition.

sliding friction A. a person leaning against a brick wall

5



PREVIEW

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7

Using the formula below, determine **how many seconds** it takes for it accelerate from **0 mph** to **60 mph**.

$$\text{acceleration} = \frac{\text{final speed} - \text{initial speed}}{\text{time}}$$

A 2 seconds C 8 seconds
B 4 seconds D 15 seconds

A the object is accelerating
B the object is decelerating
C the object is standing still
D the object starts and stops

Distance (m) vs Time (s)

9

Using the formula below, calculate the **time** it would take for a car to go from **0 mph** to **60 mph**. The car is accelerating at **6 mph/s**.

$$\text{acceleration} = \frac{\text{final speed} - \text{initial speed}}{\text{time}}$$

A 2 seconds C 6 seconds
B 4 seconds D 10 seconds

Using the formula below, calculate the **initial speed** of a car knowing the following information: The car was accelerating at **8 mph/s**, its final speed was **90 mph**, and it was traveling for **10 s**.

$$\text{acceleration} = \frac{\text{final speed} - \text{initial speed}}{\text{time}}$$

A 10 mph C 30 mph
B 20 mph D 40 mph



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