

Fundamentals of Motion and Machines

Physics · Practice Test · 9 Questions

1. What is translational motion?

- A) Movement around a fixed axis
- B) Movement in a straight or curved path
- C) Movement using a motor
- D) Movement of molecules

2. In translational motion, how do points on the body move?

- A) In different directions
- B) In circular paths
- C) The same distance in the same direction
- D) At random speeds

3. What defines rotational motion?

- A) Movement in a straight line
- B) Movement around a fixed axis
- C) Movement without changing position
- D) Movement through a vacuum

4. What is a simple machine?

- A) A machine with two or more parts
- B) A device using one basic mechanism to make work easier
- C) A complex engine
- D) A machine that requires electricity

5. What is a compound machine?

- A) A machine that never breaks
- B) A machine made of two or more simple machines
- C) A machine that uses only one mechanism
- D) A machine that is very small

6. Which simple machine is used to cut through materials?

- A) Pulley
- B) Lever
- C) Wedge
- D) Wheel and axle

7. What is the formula for Mechanical Advantage (MA)?

- A) Output force divided by input force
- B) Input force divided by output force
- C) Output work times input work
- D) Input force minus output force

8. What does efficiency measure in physics?

- A) The speed of a machine
- B) The size of a machine
- C) How well input work converts to output work
- D) The total weight of a machine

9. What is the correct formula for efficiency?

- A) $(\text{Input work} / \text{Output work}) * 100$
- B) $(\text{Output work} / \text{Input work}) * 100$
- C) Output force * Input force
- D) Input work - Output work