

**Answer on Question #42813, Physics, Mechanics**

An objects momentum depends upon the objects a) mass, speed and acceleration. b) mass, speed and direction of motion. c) speed and acceleration. d) velocity and direction of motion. e) mass and acceleration. Write the reason of your above selected choice as well.

Solution

Momentum by definition is mass multiplied by velocity of the body

$$\vec{p} = m\vec{v}$$

Hence, correct answer is b) mass, speed and direction of motion.