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**1**) A hockey puck is set in motion across a frozen pond. If ice friction and air resistance are neglected, the force required to keep the puck sliding at constant velocity is ……

A) equal to its weight. B) equal to its weight divided by its mass. C) equal to its mass times its weight.

D) none of the above

**2**) The amount of force needed to sustain motion of a rock in outer space is

A) a force equal to its weight.

B) a force less than its weight if friction is absent.

C) none of these

**3**) When no forces act on moving objects their paths are normally

A) straight lines. B) circles. C) ellipses. D) all of the above

**4**) If gravity between the Sun and Earth suddenly vanished, Earth would continue moving in

A) a curved path. B) an outward spiral path. C) an inward spiral path. D) a straight-line path.

**5**) Whirl a rock at the end of a string and it follows a circular path. If the string breaks, the tendency of the rock is to … A) follow a circular path. B) slow down. C) follow a straight-line path. D) stop.

**6**) Which concept is being illustrated when a tablecloth is quickly yanked beneath dishes resting on a table? A) equilibrium B) friction C) support force D) inertia

**7**) When you flick a card from beneath a coin that hardly moves, you're illustrating

A) inertia. B) equilibrium. C) support force. D) friction

**8**) A moving van with a stone lightly glued to the midpoint of its ceiling smoothly moves at constant velocity. When the glue gives way, the stone falls and hits the floor….

A) ahead of the midpoint of the ceiling. B) exactly below the midpoint of the ceiling. C) behind the midpoint of the ceiling. D) none of the above

**9**) A roller-coaster ride with 6 passengers takes 3 minutes. Neglecting friction, a similar ride with 12 passengers aboard would take….

A) 1.5 minutes. B) 3 minutes. C) 6 minutes. D) 18 minutes

**10**)A package falls off a truck that is moving at 30 m/s. Neglecting air resistance, the horizontal speed of the package just before it hits the ground is..

A) zero. B) less than 30 m/s but more than zero. C) about 30 m/s. D) more than 30 m/s.