أداءات وتقييمات لمنهج الرياضيات

للصف الثانى الثانوى [علمى]

للعام الدراسي 2024 / 2025

Homework   Week: (15)   Semester (2)   Mathematics Applications
Grade: Second Secondary (Science)

(1) Find the distance in kilometers traveled by car moving at a constant speed of 81 km/h in 20 minutes.

(2) A speed radar vehicle is moving on a desert road at 60 km/h. This vehicle monitors an oncoming truck, which appears to be moving at 100 km/h. What is the actual speed of the truck?

(3) A particle begins moving in a constant direction at a speed of 50 cm/s and a constant acceleration of 4 cm/s², acting in the same direction as the particle's velocity. Calculate the distance traveled 8 seconds after the start of the movement.

(4) A particle begins moving in a constant direction at a speed of 15 cm/s and a constant acceleration of 4 cm/s² in the direction of its velocity. Calculate: The distance traveled by the particle during the fifth and sixth seconds combined.

(5) A particle was thrown vertically upward from a point on the Earth's surface and returned to it 10 seconds after the moment of throwing. Find: The maximum height reached by the particle.

(6) A particle was thrown vertically upward at a speed of 14.7 m/s. Find the time taken for the particle to reach 137.2 m below the point of throwing.

(7) A body with a mass of 3 kg fell from a certain height above the Earth's surface. The momentum of the body at the moment of reaching the Earth's surface was 42 kg.m/s. Calculate the height from which the body fell, in meters.

(8) A body with a weight of 20 kg.wt falls at a constant speed on an inclined plane at an angle of 30° to the horizontal. Find: The resistance of the plane in kg.wt.

(9) A body with a mass of **5 kg** fell from a height of **4 m** towards sandy ground and sank a distance of **7 cm**. Calculate: In Newtons, the sand's resistance to the body. Assuming that it is constant .

(10) A body is thrown with a speed of **19.6 m/s** upwards in the direction of the line of the greatest slope of a rough inclined plane that forms an angle of 30° with the horizontal. If it is known that the body reaches a state of rest after two seconds, find: the coefficient of kinetic friction between the body and the plane.