

وزارة التربية والنعليى

إإدارة المركزية لنطوير المناهج

<u>إدارة ننهية مادة الرياضيات</u>

SI.SY

ادامان ونقيبمان لمنهج الرياضيان

<u>للصف الثانى الثانوى[علمى]</u>

<u>للمام الدراسي 2024 / 2025</u>



Classroom Performance 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 56 km/h for 15 minutes.
- (2) A speed radar vehicle is moving on a desert road at 40 km/h. This vehicle monitors an oncoming truck, which appears to be moving at 120 km/h. What is the actual speed of the truck?
- (3) A particle begins moving in a constant direction at a speed of 30 cm/s and with a constant acceleration of 6 cm/s² acting in the same direction as the particle's velocity. Calculate the distance traveled 5 seconds after the start of the movement.
- (4) A particle begins moving in a constant direction at a speed of 10 cm/s and with a constant acceleration of 3 cm/s² in the direction of its velocity. Calculate: The distance traveled by the particle during the seventh and eighth seconds combined.
- (5) A particle was thrown vertically upward from a point on the Earth's surface and returned to it 6 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 16 m/s. Find the time taken for the particle to reach 330 meters below the point of throwing.
- (7) A body with a mass of 2 kg fell from a certain height above the Earth's surface. The momentum of the body when it reached the Earth's surface was 28 kg.m/s. Calculate the height from which the body fell, in meters.
- (8) A body with a weight of 24 kg.wt descends at a constant speed on an inclined plane at an angle of 60° to the horizontal. Find: The resistance of the plane, in kilogram. weight.



وزارة التربية والتعليم الإدارة المركزية لتطوير المناهج مكتب مستشار الرياضيات

- (9) A body with a mass of 2 kg fell from a height of 10 meters towards sandy ground and sank a distance of 5 cm. Calculate: The resistance of the sand, in kg.wt. For the body, assuming its stability.
- (10) A body is thrown at a speed of 14.7 m/s upwards in the direction of the line of 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 1.5 seconds, then find: the coefficient of kinetic friction between the body and the plane.

