وزارة التربية والتعليم و التعليم الفنى
الادارة المركزية للتعليم العام
إدارة تنمية مادة الرياضيات

برعاية معالي وزير التربية والتعليم و التعليم الفنى

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وتوجيهات رئيس الإدارة المركزية للتعليم العام
المشرف على مستشارى المواد الدراسية

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إشراف علمي
مستشار الرياضيات

أ/ منال عزقول

أداءات وتقييمات لمنهج تطبيقات الرياضيات لغات

للصف الثانى الثانوي "علمى"
الفصل الدراسى الثانى
للعام الدراسي 2025 / 2026

الأسبوع السابع

إعداد

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(7) الأداء الصفي ـ الصف الثانى الثانوى ـ علمى ـ تطبيقات الرياضيات لغات ـ الأسبوع السابع (7)

(1) Calculate the momentum in units of (kg. m/s) of a train of mass 40 tons moving in a straight line at a constant speed of 72 km/h

(2) A body of mass of 500 gm fell from a height of 4.9 meters above the ground. Calculate the momentum of the body at the moment it reaches the ground in units of (kg. m/s).

(3) A body of mass 2 kg fell from a certain height above the ground. The momentum of the body at the moment it reached the ground was 28 kg. m/s. Calculate the height from which the body fell in meters.

(4) A body with a mass of 600 gm moves in a straight line with an initial velocity of 12 m/s and a uniform acceleration of 3 m/s^2 in the same direction as its initial velocity. Calculate the momentum of the body after 8 seconds from the start of the movement in units of (kg.m/s).

(5) A shell with a mass of 1 kg is launched at a speed of 720 km/h towards a tank with a mass of 50 tons moving towards the cannon at a speed of 20 m/s. Calculate: the momentum of the shell relative to the tank in units of (kg.m/s).

(6) A ball with a mass of 200 gm moves horizontally at a constant speed of 40 m/s, collides with a vertical wall and the magnitude of the change in the momentum of the ball as a result of the collision was 12 kg.m/s. Calculate: the rebound speed of the ball.

(7) A rubber ball of mass 400 gm fell from a height of 10 m onto a horizontal surface and rebounded to a height of 4.9 m. Calculate in (kg.m/s) the magnitude of the change in the ball's momentum as a result of the collision.

(8) From a point 240 cm below the ceiling of a room, a ball of mass 40 gm was thrown vertically upwards at a speed of 980 cm/s and hit the ceiling. Its momentum changed by 0.4 kg.m/s. Find the rebound speed of the ball.

(9) A stone of mass 300 gm falls from rest for 3 seconds, then hits the surface of a pond sinks into the water at a constant speed and covers 20 meters in 4 seconds. Find the change in the stone's momentum as a result of its collision with the surface of the water.

(10) A rubber ball with a mass of 100 gm moving horizontally at a constant speed of 120 cm/s collided with a vertical wall and rebounded in a direction perpendicular to the wall after losing two-thirds of its speed. Calculate: the amount of change in the ball’s momentum as a result of the collision.

(7) الأداء المنزلى ـ الصف الثانى الثانوى ـ علمى ـ تطبيقات الرياضيات لغات ـ الأسبوع السابع (7)

(1) Calculate the momentum of a car with a mass of 3 tons moving in a straight line at a constant speed of 54 km/h in the unit (ton.m/s).

(2) A body with a mass of 200 gm fell from a height of 10 meters above the ground, Calculate the momentum of the body at the moment it reached the ground in the unit (kg.m/s).

(3) A body with a mass of 3 kg fell from a certain height above the ground, the momentum of the body at the moment it reached the ground was 42 kg.m/s. Calculate in meters the height from which the body fell.

(4) A body with a mass of 400 gm moves in a straight line with an initial speed of 10 m/s and a uniform acceleration of 4 m/s^2 in the same direction as its initial speed, calculate the momentum of the body after 6 seconds from the start of the movement in the unit (kg.m/s).

(5) A shell with a mass of 2 kg is launched at a speed of 540 km/h towards a tank with a mass of 35 tons moving towards the gun at a speed of 40 m/s. Calculate: the magnitude of the momentum of the shell relative to the tank in units of (kg.m/s).

(6) A ball with a mass of 500 gm is moving horizontally at a constant speed of 30 m/s, collides with a vertical wall and the magnitude of change in the momentum of the ball as a result of the collision is 20 kg.m/s. Calculate: the speed of the ball's rebound.

(7) A rubber ball with a mass of 200 gm fell from a height of 90 cm onto a horizontal surface and rebounded to a height of 40 cm. Calculate in units of (kg.m/s) the magnitude of change in the momentum of the ball as a result of the collision.

(8) From a point 100 cm below the ceiling of a room, a ball of mass 200 gm was thrown vertically upwards at a speed of 490 cm/s, hitting the ceiling and its momentum changed by 0.6 kg m/s.
Find: the rebound velocity of the ball.

(9) A stone of mass 800 gm falls from rest for 2 seconds, then hits the surface of a pond, and sinks into the water at a constant speed, covering 12 meters in 3 seconds. Find the change in the momentum of the stone as a result of its collision with the surface of the water.

(10) A rubber ball of mass 400 gm moves horizontally at a constant speed of 90 cm/s, hits a vertical wall and rebounds in a direction perpendicular to the wall after losing a third of its velocity. Calculate: The magnitude of change in the momentum of the ball as a result of the collision.

(7) التقييمات الأسبوعية ـ الصف الثانى الثانوى ـ علمى ـ تطبيقات الرياضيات لغات ـ الأسبوع السابع (7)

First Group

(1) Calculate the momentum in units (tons.m/s) for a train with a mass of 30 tons moving in a straight line at a constant speed of 36 km/h.

(2) A body with a mass of 100 gm falls from a height of 19.6 meters above the ground. Calculate the momentum in units (kg.m/s) for the body when it reaches the ground.

(3) A stone with a mass of 2 kg falls from the rest for 4 seconds, then collides with the surface of a pond, and sinks into the water at a constant speed, covering 24 meters in 3 seconds. Find the change in the momentum of the stone as a result of its collision with the surface of the water.

(4) A ball with a mass of 400 gm moving horizontally at a constant speed of 25 m/s collided with a vertical wall and the change in the ball's momentum as a result of the collision was 16 kg.m/s. Calculate: the ball's rebound speed.

(5) A shell with a mass of 800 gm is launched at a speed of 360 km/h towards a tank moving towards the cannon at a speed of 24 m/s. Calculate: the momentum in (kg.m/s) of the shell relative to the tank.

Second Group

(1) Calculate the momentum in (tons.m/s) of a train with a mass of 20 tons moving in a straight line at a constant speed of 18 km/s.

(2) A body with a mass of 700 gm fell from a height of 40 meters above the ground. Calculate the momentum in (kg.m/s) of the body at the moment it reached the ground.

(3) A stone with a mass of 3 kg falls from the rest for 2 seconds, then collides with the surface of a pond, and sinks into the water at a constant speed, covering 15 meters in 3 seconds. Find the change in the momentum of the stone as a result of its collision with the surface of the water.

(4) A ball with a mass of 200 gm moves horizontally at a constant speed of 35 m/s and collides with a vertical wall. The change in the momentum of the ball as a result of the collision was 8 kg. m/s. Calculate: The rebound speed of the ball.

(5) A shell with a mass of 500 gm is launched at a speed of 540 km/h towards a tank moving towards the cannon at a speed of 30 m/s. Calculate: The magnitude of momentum in units of (kg. m/s) for the shell relative to the tank.

The third group

(1) Calculate the momentum in units of (ton. m/s) for a train with a mass of 50 tons moving in a straight line at a constant speed of 90 km/s.

(2) A body with a mass of 600 gm falls from a height of 4.9 m above the ground. Calculate the momentum in (kg.m/s) of the body when it reaches the ground.

(3) A stone with a mass of 1 kg falls from rest for 3 seconds, then collides with the surface of a pond, and sinks into the water at a constant speed, covering 14 meters in 2 seconds. Find the change in the momentum of the stone as a result of its collision with the surface of the water.

(4) A ball with a mass of 100 gm moves horizontally at a constant speed of 24 m/s, collides with a vertical wall, and the magnitude of change in the momentum of the ball as a result of the collision was 7 kg. m/s. Calculate: the rebound speed of the ball.

(5) A shell with a mass of 600 gm is launched at a speed of 180 km/h towards a tank moving towards the cannon at a speed of 10 m/s. Calculate: the magnitude of momentum in (kg.m/s) of the shell relative to the tank.