



وزارة التربية والتعليم و التعليم الفني
الإدارة المركزية للتعليم العام
إدارة تنمية مادة الرياضيات

برعاية معالي وزير التربية والتعليم و التعليم الفني السيد الأسناذ / محمد عبد اللطيف

ونوجيهات رئيس الإدارة المركزية للتعليم العام
المشرف على مسنشارى المواد الدراسية

د/ هالة عبد السلام خفاجى

إشراف علمي
مسنشار الرياضيات

أ/ منال عزقول

إدعاءات ونقييمات لمنهج تطبيقات الرياضيات لفان

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

الأسبوع العاشر

إعداد

أ/ عفاف جاد

د/ ممدت عطية شعراوى

أ/ ممدود سلام

ترجمة

أ/ ممدود سليمان نظيم

مراجعة الترجمة

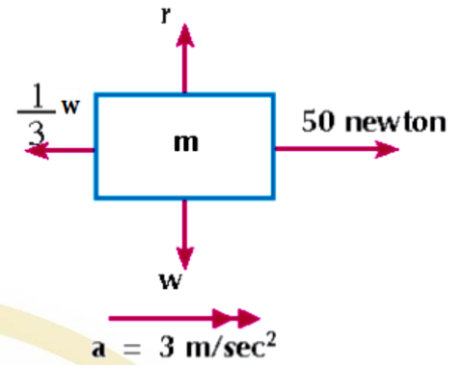
أ/ عمرو فاروق

أ/ عثمان مصطفى عثمان

(10) الأداء الصفي - الصف الثاني الثانوي - علمي - تطبيقات الرياضيات لغات - الأسبوع العاشر (10)

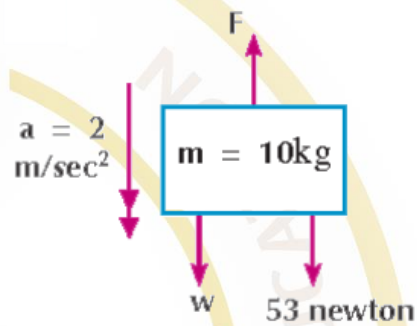
(1) In the opposite figure:

A force of 50 N acts on a body with a mass of m kg, and acquires it a uniform acceleration, shown in the figure in magnitude and direction. Find the value of m .



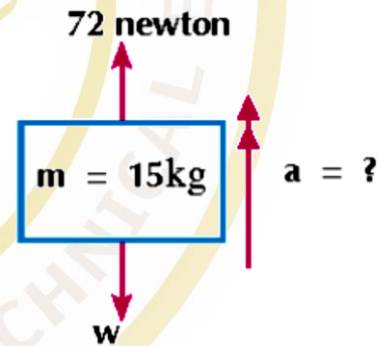
(2) In the opposite figure:

A force of F acts on a body with a mass of 10 kg, and acquires it a uniform acceleration, shown in the figure in magnitude and direction. Find the value of F .



(3) In the opposite figure:

A force of 72 N acts on a body with a mass of 15 kg, and acquires it a uniform acceleration " a ", measured in m/s^2 , shown in the figure in magnitude and direction. Find the value of a .



(4) A body with a mass of 150 gm was acted upon by a force of 4500 dynes. Find the resulting acceleration.

(5) A mass of 20 kg was placed on a smooth horizontal plane, and a horizontal force of magnitude F acted upon it, to move it with a uniform acceleration $49 m/s^2$, find F .

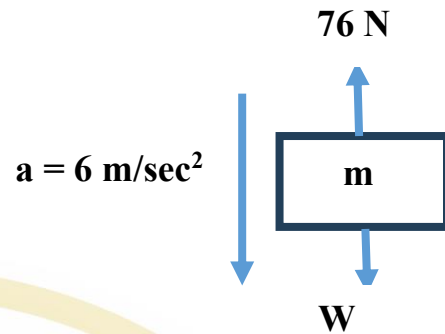
- (6) A force of 10 N acted on a stationary object of mass 8 kg, moving it in its direction with constant acceleration. Calculate the distance traveled after 12 seconds.
- (7) A force of 10 N acted on a stationary object of mass 8 kg, moving it in its direction with constant acceleration. Calculate the object's velocity after 12 seconds.
- (8) A stationary car with a mass of 4.9 tons was acted upon by a force, increasing its speed to 27 km/h in one minute. Find the magnitude of the force, in kg.wt, that acted on the car.
- (9) A train with a mass of 50 tons was moving at a speed of 72 km/h. The brakes stopped after it had traveled 250 meters. Find the force of the brakes resisting the train's motion, expressed in kilograms per ton of its mass.
- (10) A bullet with a mass of 7 gm. was fired horizontally from the muzzle of a gun at a speed of 245 m/sec at a vertical barrier of wood. and embed in it for 12.25 cm before being at rest. Calculate in kg.wt, the magnitude of wood's resistance to a bullet.

(10) الأداء المنزلي - الصف الثاني الثانوي - علمى - تطبيقات الرياضيات لغات - الأسبوع العاشر (10)

(1) In the opposite figure:

A force of 76 N acts on a body with a mass of m kg, and acquires it a uniform acceleration, shown in the figure in magnitude and direction.

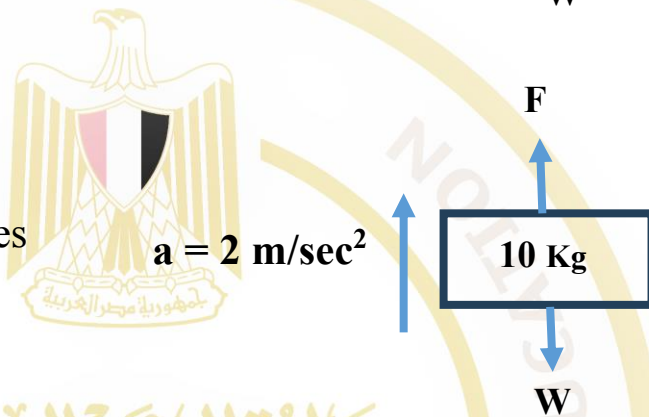
Find the value of m .



(2) In the opposite figure:

A force of F acts on a body with a mass of 10 kg, and acquires it a uniform acceleration, shown in the figure in magnitude and direction.

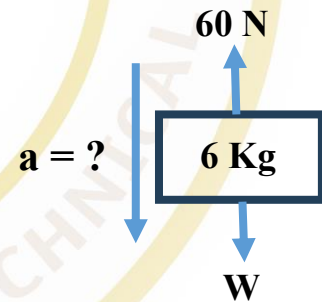
Find the value of F



(3) In the opposite figure:

A force of 60 N acts on a body with a mass of 6 kg, and acquires it a uniform acceleration, measured in m/sec^2 , shown in the figure in magnitude and direction.

Find the value of a .



(4) A body with a mass of 200 gm was acted upon by a force of 5000 dynes. Find the resulting acceleration.

(5) A mass of 10 kg was placed on a smooth horizontal plane, and a horizontal force of magnitude F acted upon it, to move it with a uniform acceleration $19.6 m/sec^2$, find F .

- (6) A force of 30 N acted on a stationary object with a mass of 10 kg, moving it in its direction with constant acceleration. Calculate the distance traveled after 8 seconds.
- (7) A force of 30 N acted on a stationary object with a mass of 10 kg, moving it in its direction with constant acceleration. Calculate the object's velocity after 10 seconds.
- (8) A stationary car with a mass of 6 tons was acted upon by a force, increasing its speed to 36 km/h in 30 sec. Find the magnitude of the force, in kg.wt, that acted on the car.
- (9) A train with a mass of 40 tons was moving at a speed of 54 km/h. The brakes stopped after it had traveled 300 meters. Find the force of the brakes resisting the train's motion, expressed in kg. wt. per ton of its mass.
- (10) A bullet with a mass of 10 gm was fired horizontally from the muzzle of a gun at a speed of 240 m/sec at a vertical barrier of wood. and embed in it for 20 cm before being at rest. Calculate in kg.wt, the magnitude of wood's resistance to a bullet.

(10) التقييمات الأسبوعية - الصف الثانى الثانوى - علمى - تطبيقات الرياضيات لغات - الأسبوع العاشر (10)

First Group

- (1) A body with a mass of 300 gm was acted upon by a force of 6000 dynes. Find the resulting acceleration.
- (2) A mass of 40 kg was placed on a smooth horizontal plane. A horizontal force of F acted upon it, moving it with a constant acceleration of 12 m/sec^2 . Find the value of F .
- (3) A force of 15 N acted upon a stationary body with a mass of 5 kg, moving it in its direction with a constant acceleration. Calculate the distance traveled after 10 seconds.
- (4) A stationary car with a mass of 3.9 tons was acted upon by a force, increasing its speed to 18 km/h in 15 seconds. Find the magnitude of the force acting on the car in kg.wt.
- (5) A train with a mass of 60 tons was moving at a speed of 72 km/h. The brakes stopped the train after it had traveled 400 meters. Find the magnitude of the brake force resisting the train's motion, measured in kilogram weight per ton of its mass.

Second Group

- (1) A body with a mass of 240 gm was acted upon by a force of 7200 dynes. Find the resulting acceleration.
- (2) A 25 kg mass was placed on a smooth horizontal plane. A horizontal force of F acted upon it, moving it with a constant acceleration of 16 m/sec^2 . Find the value of F .

- (3) A force of 35 N acted upon a stationary body with a mass of 7 kg, moving it in its direction with a constant acceleration. Calculate the distance traveled after 6 seconds.
- (4) A stationary car with a mass of 4 tons was acted upon by a force, increasing its speed to 36 km/h in 20 seconds. Find the magnitude of the force acting upon the car, measured in kilogram weight.
- (5) A train with a mass of 45 tons was moving at a speed of 108 km/h. The brakes stopped after it had traveled 900 meters. Find: the magnitude of the brake force resisting the train's movement, measured in kilogram weight per ton of its mass.

Third Group

- (1) A body with a mass of 250 gm was acted upon by a force of 5000 dynes. Find: the resulting acceleration.
- (2) A mass of 36 kg was placed on a smooth horizontal plane. A horizontal force of F acted upon it, moving it with a constant acceleration of 10 m/sec^2 . Find: F.
- (3) A force of 45 N acted upon a stationary body with a mass of 9 kg, moving it in its direction with a constant acceleration. Calculate: the distance traveled after 8 seconds.
- (4) A stationary car with a mass of 4 tons was acted upon by a force, so its speed increased to 54 km/h in 30 seconds. Find: in kilogram weight, the magnitude of the force acting upon the car.
- (5) A train with a mass of 40 tons was moving at a speed of 36 km/h, the brakes stopped after it had traveled 200 meters, so find: the mag. of the brake force resisting the train's movement, estimated in kg.wt per ton of its mass.