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

ا/ منال عزقول

أداءات وتقييمات لمنهج تطبيقات الرياضيات لغات

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

الأسبوع الرابع

إعداد

| ا/ عفاف جاد | د/ مدحت عطية شعراوى | ا/ محمود سلام |

ترجمة

ا/ محمود سليمان نظيم

مراجعة الترجمة

| ا/ عمرو فاروق | ا/ عثمان مصطفى عثمان |

(1) A bullet was fired horizontally at a wooden block at a speed of 100 m/s and embedded 50 cm inside it. Find the acceleration at which the bullet moves inside the wooden block if it is known that the acceleration is constant. If a similar bullet is fired at another wooden block like the first, its thickness is 18 cm. What is the speed at which the bullet exits the wooden block?

(2) The speed of a car decreased regularly from 54 km/h to 18 km/h after covering a distance of 200 meters. Find the distance the car travels after that until it stops.

(3) A particle began its movement in a constant direction at a speed of 14 cm/s and a constant acceleration of 6 cm/s^2 in the direction of its speed. Calculate: the distance the particle covered during the fifth second.

(4) A particle started its motion in a constant direction with a speed of 10 cm/s and a constant acceleration of 3 cm/s^2 in the direction of its speed. Calculate: the distance covered by the particle during the seventh and eighth seconds together.

(5) A body started moving at a speed of 10 m/s with a constant acceleration of 4 m/s^2 and covered a distance 12 meters, then the acceleration is stopped and it moved at the speed it acquired for a distance of 42 meters. Find the total time of the movement.

(6) A body started moving from rest in a straight line with a constant acceleration 4 cm/s^2 for 30 seconds, then it moved at the speed that it acquired for another 10 seconds. Find the total distance covered by the body.

(7) A body started moving from rest with a constant acceleration of 2 m/s^2 and when its speed became 12 m/s it moved with a constant retardation 3 m/s^2 until it came to rest. Find the total distance.

(1)

(8) A body started its motion from rest with a uniform acceleration 3 m/s^2 and when its speed became 15 m/s it moved with a uniform deceleration of 5 m/s^2 until it came to rest. Find the total time.

(9) A particle moved with an initial velocity in a constant direction and with a uniform acceleration. If it covered a distance of 20 meters in the third second of its motion, then covered a distance of 60 meters in the fifth and sixth seconds together. Calculate the acceleration with which the particle moved and its initial velocity.

(10) A train moves in a straight line between two stations (A) and (B), the distance between them is 700 meters. It starts from station (A) from rest with a uniform acceleration of 2 m/s^2 for 10 seconds, then moves after that with the speed it acquired for a period of time, then covers the last 60 meters of its motion with a uniform deceleration until it stops at station (B). Find the time it takes the train to cover the distance between the two stations.

(1) A bullet was fired horizontally at a wooden block at a speed of 40 m/s and embedded 20 cm into it. Find the acceleration at which the bullet moves inside the wooden block if it is known that the acceleration is constant. If a similar bullet is fired at another wooden block like the first, 15 cm thick. What is the speed at which the bullet exits the wooden block?

(2) The speed of a car decreased regularly from 72 km/h to 36 km/h after covering a distance of 300 meters. Find the distance the car travels after that until it stops.

(3) A particle began its movement in a constant direction at a speed of 24 cm/s and with a constant acceleration of 8 cm/s^2 in the same direction as its speed. Calculate: the distance traveled in the seventh second.

(4) A particle started its motion in a constant direction with a speed of 15 cm/s and a constant acceleration of 4 cm/s^2 in the direction of its speed. Calculate: The distance covered by the particle during the fifth and sixth seconds together.

(5) A body started moving at a speed of 8 m/s with a constant acceleration of 2 m/s^2 and covered a distance of 20 meters, then the acceleration stopped, and it moved at the speed it acquired for a distance of 48 meters. Find the total time of the movement.

(6) A body started moving from rest in a straight line with a constant acceleration of 5 cm/s^2 for 20 seconds, then moved at the speed it acquired for another 8 seconds. Find the total distance covered by the body.

(7)   A body started moving from rest with a constant acceleration of 3 m/s^2 and when its speed became 18 m/s it moved with a constant retardation of 6 m/s^2 until it came to rest. Find the total distance.

(8)   A body started its motion from rest with a uniform acceleration of 5 m/s^2 and when its speed became 20 m/s it moved with a uniform deceleration of 2 m/s^2 until it came to rest. Find the total time.

(9)   A particle moved with an initial velocity in a constant direction and with a uniform acceleration. If it covered a distance of 10 meters in the third second of its motion, then covered a distance of 50 meters in the fifth and sixth seconds together. Calculate the acceleration with which the particle moved and its initial velocity.

(10)   A train moves in a straight line between two stations (A) and (B), the distance between them is 840 meters. It starts from station (A) from rest with a uniform acceleration of 5 m/s^2 for 8 seconds, then it moves after that with the speed it acquired for a period, then it covers the last distance of 80 meters of its motion with a uniform deceleration until it stops at station (B). Find the time it takes the train to cover the distance between the two stations.

(4) التقييمات الأسبوعية ـ الصف الثانى الثانوى ـعلمى ـ تطبيقات الرياضيات لغات ـ الأسبوع الرابع.(4)

First Group

(1)   A car's speed decreased regularly from 36 km/h to 18 km/h after covering a distance of 300 meters. Find the distance the car travels after that until it stops.

(2)   A particle started moving in a constant direction with a speed of 14 cm/s and a constant acceleration of 6 cm/s^2 in the direction of its speed. Calculate: The distance the particle traveled during the sixth second only.

(3)   A body started moving from rest with a constant acceleration of 3 m/s^2 and when its speed became 18 m/s it moved with a constant retardation of 6 m/s^2 until it stopped. Find the total distance.

(4)   A particle moved with an initial speed in a constant direction and with constant acceleration. If it covered a distance of 15 meters in the fourth second of its movement, then covered a distance of 100 meters in the sixth and seventh seconds together. Calculate the acceleration with which the particle moved.

(5)   A body started its motion from rest with a uniform acceleration of 4 m/s^2 and when its speed became 20 m/s it moved with a uniform deceleration of 2 m/s^2 until it came to rest. Find the total time.

Second Group

(1) A car's speed decreased uniformly from 72 km/h to 54 km/h after covering a distance of 350 meters. Find the distance the car travels after that until it comes to rest.

(2) A particle started its motion in a constant direction with a speed of 14 cm/s and a uniform acceleration of 6 cm/s^2 in the direction of its speed. Calculate: the distance covered by the particle during the fourth second only.

(3) A body started its motion from rest with a uniform acceleration of 2 m/s^2 and when its speed became 8 m/s it moved with a uniform deceleration of 5 m/s^2 until it came to rest. Find the total distance.

(4) A particle moved with an initial velocity in a constant direction and with a constant acceleration. If it covered a distance of 20 meters in the third second of its movement, then covered a distance of 70 meters in the fourth and fifth seconds together. Calculate the acceleration with which the particle moved.

(5) A body started its movement from rest with a constant acceleration of 6 m/s^2 and when its speed became 30 m/s it moved with a constant deceleration of 5 m/s^2 until it came to rest. Find the total time.

The third group

(1) The speed of a car decreased regularly from 108 km/h to 72 km/h after covering a distance of 500 meters. Find the distance the car travels after that until it comes to rest.

(2) A particle started its movement in a constant direction with a speed of 14 cm/s and a constant acceleration of 6 cm/s^2 in the direction of its speed. Calculate: the distance covered by the particle during the seventh second only.

(3) A body started its motion from rest with a uniform acceleration of 3 m/s^2 and when its speed became 12 m/s it moved with a uniform deceleration of 4 m/s^2 until it came to rest. Find the total distance.

(4) A body moved with an initial velocity in a constant direction and with a uniform acceleration. If it covered a distance of 30 meters in the sixth second of its motion, then covered a distance of 90 meters in the eighth and ninth seconds together. Calculate the acceleration with which the particle moved.

(5) A body started its motion from rest with a uniform acceleration of 4 m/s^2 and when its speed became 24 m/s it moved with a uniform deceleration of 3 m/s^2 until it came to rest. Find the total time.