



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

برعاية معالي وزير التربية والتعليم و التعليم الفنى السيد الأستاذ/ محمد عبد اللطيف

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 الرياضيات البحتة لغات

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

الأسبوع الأول

إعداد

أ/ إيهاب فتحى **أ / محمد الفار** **أ/ محمود سلام**

ترجمة

أ/ عمرو فاروق محمود

مراجعة الترجمة

أ/ عثمان مصطفى عثمان

مراجعة عامة

أ/ شريف البرهامى



① الرياضيات البحتة لغات - للصف الثاني الثانوي علمي الأداء الصفي الأسبوع الأول ①

Exercises on the concept and the properties of Sequences

1) Write down the first five terms of the sequence whose n^{th} term is given by the relation:

$$T_n = 2n^2 - 1$$

Solu:

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2) Write the general term of the sequence of the following even numbers: (2 , 4 , 6 , 8 ,)

Solu:

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3) Write down the first six terms of the sequence (T_n) where: $T_{n+2} = T_{n+1} + T_n$ where $n \geq 1$,
 $T_1 = 3$ and $T_2 = 4$.

Solu:

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4) Prove that the sequence (T_n) : $T_n = 3n + 2$ is an increasing sequence for all values of n

Solu:

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5) Find the eighth term of the sequence whose general term is given by the relation:

$$T_n = n - n^2$$

Solu:

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Exercises on the Angles of elevation and depression

6) From the top of a tower 65 meters high, the angles of depression of points A and B were measured from the horizontal plane and were 32° , $12^\circ 21'$ respectively. If the point D represents the base of the tower. $A \in \overline{BD}$. Find the length of \overline{AB} to the nearest meter.

Solu:

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7) A house of height of 12 meters is built on a hill. From a point on the ground, the angles of elevation of the top and base of the house were measured. Their measurements were found to be 32° and 24° respectively. Find the height of the hill to the nearest meter.

Solu:

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Exercises on the Variation , Average Rate of Chang and Rate of Change

8) If f is a function: $f(x) = 4x^2 + x - 2$ and x changed from 2 to $2 + h$, then find the function of variation V , then calculate the variation in f when: $h = 0.3$

Solu:

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1 الرياضيات البحتة لغات - للصف الثاني الثانوي علمي الأداء المنزلي الأسبوع الأول 1

Exercises on the concept and the properties of Sequences

1) Write down the first five terms of the sequence whose n^{th} term is given by the relation:

$$T_n = n^2 - 2$$

Solu:

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2) Write the general term of the sequence of the following odd numbers: (1 , 3 , 5 , 7 ,)

Solu:

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3) Write down the first six terms of the sequence (T_n) where: $T_{n+2} = T_{n+1} + T_n$, where $n \geq 1$, $T_1 = 2$ and $T_2 = 3$.

Solu:

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4) Prove that the sequence (T_n): $T_n = \frac{1}{3n-1}$ is a decreasing sequence for all values of n

Solu:

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5) Find the seventh term of the sequence whose general term is given by the relation:

$$T_n = 2n^2 + 3$$

Solu:

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Exercises on the Angles of elevation and depression

6) From a point on the surface of the earth the angle of elevation of the top of a tower was observed and found to be 25° . Then the observer walked a distance of 57 meters in a straight horizontal line towards the base of the tower and found that the angle of elevation of the top of the tower was $52^\circ 30'$. Find the height of the tower "approximate to the nearest meter".

Solu:

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7) A person observed the angle of elevation of the top of a tower from a point on the surface of the earth and found that its measurement was 20° . Then he walked on a horizontal path towards the base of the tower for a distance of 50 meters and observed the angle of elevation of the top of the tower again and found that its measurement was 42° . Find the height of the tower "approximate to the nearest meter"

Solu:

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