



وزارة التربية والتعليم

الإدارة المركزية لتطوير المناهج

إدارة تنمية مادة الرياضيات

أداءات ونقيمات لمنهج الرياضيات

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للعام الدراسى 2024 / 2025

الرياضيات



رياضيات بحة لغات ٢ ث علمي - الأداء الصفي - الأسبوع الخامس عشر

Revision Exercises on Algebra

1) Write using summation notation the series: $5 + 10 + 15 + 20 + \dots + 50$

Solu:

2) An arithmetic sequence its first term exceeds than twice its fifth term by 2 , the arithmetic mean of its third and sixth terms is 16. How many terms must be taken from the first term to get the sum equals zero?

Solu:

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3) (T_n) is a geometric sequence its terms are positive, $T_2 = 6$, $T_3 - T_1 = 9$. Find the sum of the first twelve terms.

Solu:

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4) Find the solution set for the following equation: ${}^{12}C_r = {}^{12}C_{2r+3}$

Solu:

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Revision Exercises on Differentiation Calculus

5) If $f(x) = x^2 + 3x - 1$, then find the average rate of change when x changes from 4.5 to 3

Solu:

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6) Find the equations of the tangent and normal to the curve : $y = \frac{x+3}{x+1}$, at the point on the curve whose x-coordinate equals - 1

Solu:

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7) Find: $\int \csc x (\cot x - \csc x) dx$

Solu:

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8) Find : $\int 2x(x^2 - 4)^3 dx$

Solu:

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Revision Exercises on Trigonometry

9) A ship moved from a certain point in a direction of 70° east of south at a speed of 12 km/h. At the same time, another ship moved from the same point in a direction of 55° north of east at a speed of 5 km/h. Find the distance between the two ships after two hours, rounded to the nearest two decimal places.

Solu:

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10) If : $\sin A = \frac{4}{5}$ such that $A \in]0, \frac{1}{2}\pi[$, $\cot B = \frac{5}{12}$ such that $B \in]\pi, \frac{3}{2}\pi[$, then without using the calculator find each of : $\tan (A - B)$, $\sin 2x$

Solu:

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