

وزارة التربية والتعليم و التعليم الفنى

الإدارة المركزية للتعليم العام

إدارة تنمية مادة الرياضيات

برعاية معالي وزير التربية والتعليم و التعليم العام

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وتوجيهات رئيس الإدارة المركزية للتعليم العام

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مستشار الرياضيات

أ/ منال عزقول

أداءات وتقييمات لمنهج الرياضيات

للصف الأول الثانوي لغات

الفصل الدراسى الأول

للعام الدراسي ٢٠٢٦ / ٢٠٢٧

الأسبوع السادس

لجنة الإعداد

أ/ إيهاب فتحى أ/ عصام الجزار أ/ عبير نجاح أ/ عفاف جاد

ترجمة

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⑥ الرياضيات لغات للصف الأول الثانوي الأداء الصفى الأسبوع السادس ⑥

(1) If the product of the two roots of the equation:
$3x^2 + 8x - k = 0$ equals 4, find the value of k.

(2) If (3 + i) is one of the roots of the equation: $x^2 + kx + m = 0$,
where k, m are two real numbers non-zero.
Find First: the value of the other root.
Second: the value of k and m

(3) If one of the roots of the equation: $x^2 - (k - 3)x = -5$
is the additive inverse of the other root, find the value of k.

(4) Prove that: a) $1 - 2sin^2 90° = cos 180°$ b) $cos\frac{\pi}{2} = cos^2\frac{\pi}{4} - sin^2\frac{\pi}{4}$

(5) Without using the calculator prove that:
$sin 60° \, cos 30° - sin^2 45° = cos 60° \, sin 30°$

(6) If $\sin \propto = \frac{3}{5}$, where $\propto$ is the smallest positive angle,
$\tan\theta = \frac{5}{12}$, where $180° < \theta < 270°$, find the value of the expression:
$sin \propto cos\theta - cos \propto sin\theta$

(7) If the side lengths of triangle ABC are 10 cm,15 cm, 20 cm, and the lengths of the corsponding sides of triangle XYZ are 6 cm, 9 cm, 12 cm respectively, find the reatio between:
First: their perimeters second: their areas

(8) If the lengths of two corsponding sides of two similar polygons are 3 cm, 4 cm, and the area of the smaller polygon equals 135 cm^2, find the area of the greater one.

(9) If the reatio between the areas of two similar polygons is 16 : 25 and the difference btween their perimeters is 20 cm, find the perimeter of each of them.

(10) Two farms in the shap of two similar polygons, the ratio between the lengths of two corresponding sides is 5 : 3, if the area of greater farm incrases than the smaller farm by 32 faddan, then find the area of each of them.

(1) Find the value of k that makes one of the roots of the equation: $x^2 + (k-1)x - 3 = 0$ is the additive inverse of the other root.

(2) If $x = 2$ is one of the roots of the equation: $ax^2 - 5x + a = 0$

Find: first: the value of a. Second: the value of the second root.

(3) If $\sqrt{3}i, -\sqrt{3}i$ are the two roots of the equation: $x^2 + ax + b = 0$, find the value of a, b.

(4) Prove that: $3sin60° \, tan60° - 4 = 2sec45° \, csc45° + sin30° - 8cos60°$

(5) Find the value of the expression: $cos\frac{\pi}{2} \, cos0 + sin\frac{3\pi}{2} \, sin\frac{\pi}{2}$.

(6) If $\sin \propto = \frac{1}{2}$, where $\propto$ is the smallest positive angle,

$\tan\theta = \frac{\sqrt{3}}{2}$, where $180° < \theta < 270°$

Find the value of the expression: $sin \propto cos\theta + cos \propto sin\theta$.

(7) If the reatio between the areas of two similar triangls is 4 : 9,
first: find the ratio between the lengths of two corrsponding sides
Second: if the perimeters of the larger triangle is 90 cm,
find the perimeter of the smaller triangle.

(8) The two polygons ABCD, XYZL are similar, 3XY = 4AB, if the area of the polygon ABCD equals 18 cm^2, find the area of the polygon XYZL.

(9) The ratio between the perimeters of two similar polygons is 4 : 5, and the area of the greater polygon is 100 cm^2, find the area of the smaller one.

(10) Two similar polygons the sum of their areas is 169 cm^2, and the ratio between their perimeters is 2 : 3, find the area of each of them.