

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 2026 / 2027

الأسبوع التاسع

لجنة الإعداد

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

ترجمة

أ/ محسب على

مراجعة

أ/ شريف البرهامى أ/ محمود درويش

(1) Form the quadratic equation of roots $\frac{2}{i}, \frac{2+2i}{1-i}$

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

(3) If L, m are the two roots of the equation: $x^2 - 7x + 3 = 0$, find the quadratic equation of roots $2L + 3, 2m + 3$.

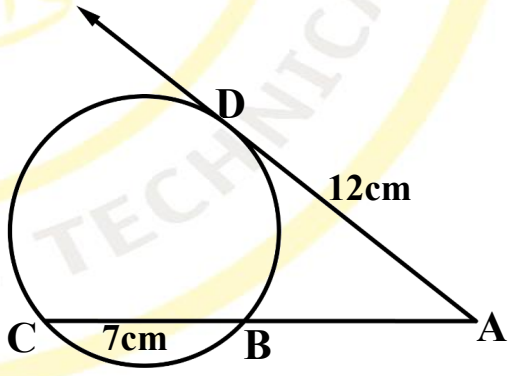
(4) Graph the curve of the function: $y = \frac{1}{2}sinx$, where $x \in [0, 2\pi]$.

(5) Graph the curve of the function: $y = cosx$, where $x \in [0, 2\pi]$.

(6) Find the maxiumum, and minimum values of the following functions then deduce the range of each:

(a) $f(\theta) = sin\theta$ (b) $f(\theta) = 5cos\theta$.

(7) In the opposite figure:
A is appoint outside a circle,
$\overrightarrow{AD}$ is a tangent to the circle
$\overline{AC}$ intrsects the circle at B, C
$AD = 12cm, BC = 7cm$
Find the length of $\overline{AB}$.



(8) In the opposite figure:

A is a point outside a circle,

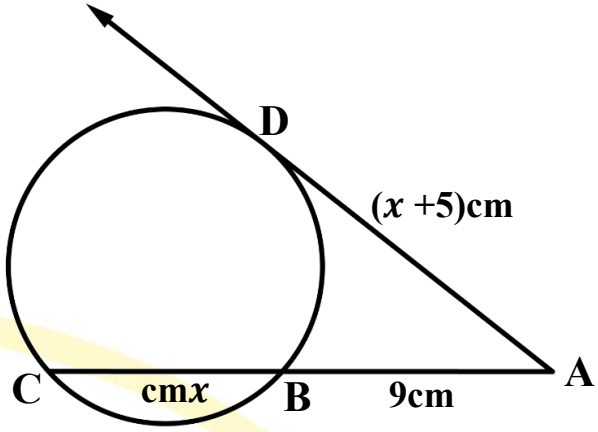
$\overrightarrow{AD}$ is a tangent to the circle

$\overline{AC}$ intrsects the circle at B, C

$AD = (x + 5)cm$,

$AB = 9cm$

Find the length of $\overline{BC}$.



(9) In the opposite figure:

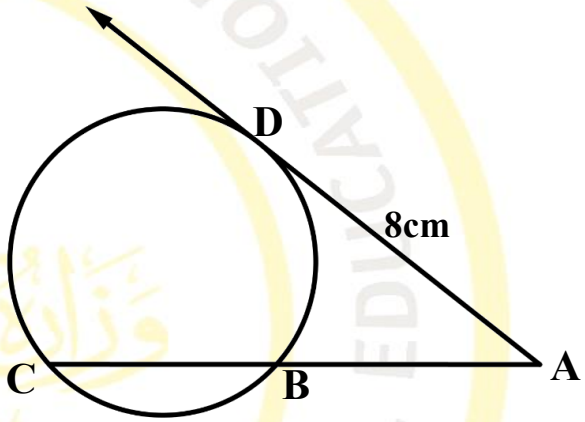
A is a point outside a circle,

$\overrightarrow{AD}$ is a tangent to the circle

$\overline{AC}$ intrsects the circle at B, C

$AD = 8cm, AB : AC = 1:2$

Find the length of $\overline{AB}$.



(10) In the opposite figure:

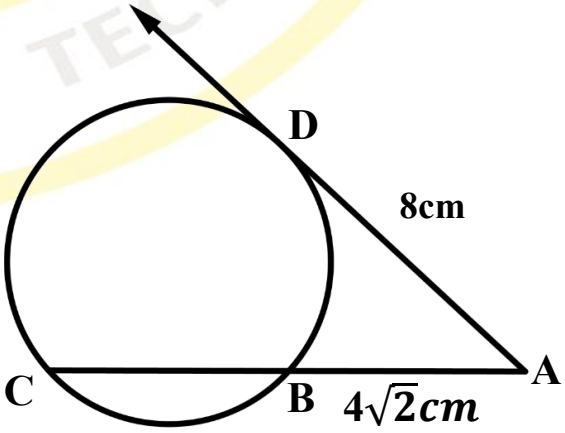
A is a point outside a circle,

$\overrightarrow{AD}$ is a tangent to the circle

$\overline{AC}$ intrsects the circle at B, C,

$AB = 4\sqrt{2}cm, AD = 8cm$

Prove that AB = BC.



1) Form the quadratic equation of roots: $3 - 2\sqrt{2}i$, $3 + 2\sqrt{2}i$

2) If the product of the roots of the equation: $2x^2 + 7x + 3k = 0$
equals the sum of the roots of the equation: $x^2 - (k + 4)x = 0$,
find the value of k.

3) If L, M are the two roots of the equation: $x^2 - 7x + 3 = 0$,
find the quadratic equation of roots $L + 3, M + 3$.

4) Graph the curve of the function: $y = 2sinx, where\ x \in [0, 2\pi]$.

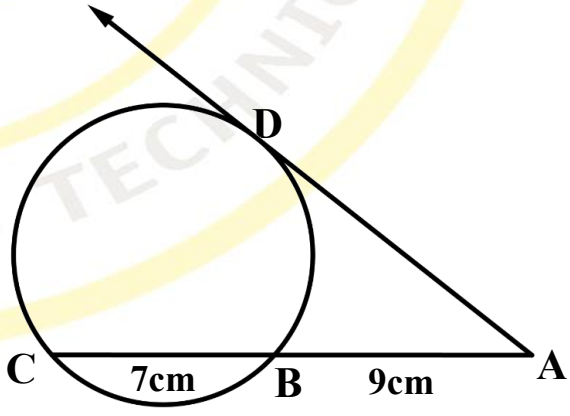
5) Graph the curve of the function: $y = 3cosx, where\ x \in [0, 2\pi]$.

6) Find the maxiumum, and minimum values of the following functions then deduce the range of each:

(a) $f(\theta) = cos\theta$ (b) $f(\theta) = \frac{3}{2}\ sin\theta$

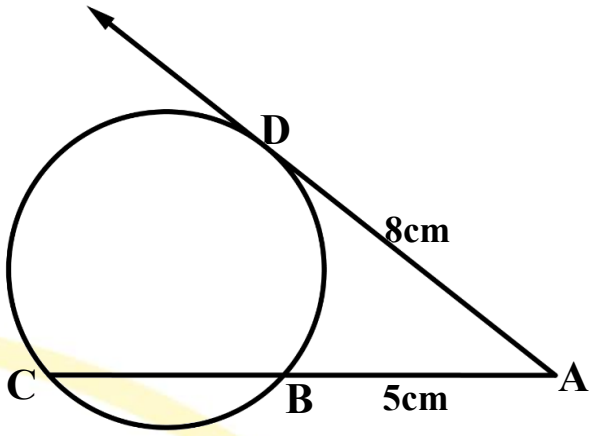
7) In the opposite figure:

A is a point outside a circle,
$\overrightarrow{AD}$ is a tangent to the circle
$\overline{AC}$ intrsects the circle at B, C
$AB = 9cm, BC = 7cm$
Find the length of $\overline{AD}$.



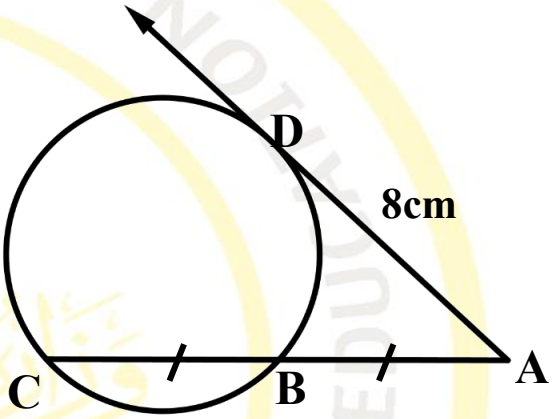
8) In the opposite figure:

A is a point outside a circle,
$\overrightarrow{AD}$ is a tangent to the circle
$\overline{AC}$ intrsects the circle at B, C
$AD = 8cm, AB = 5cm$
Find the length of $\overline{BC}$.



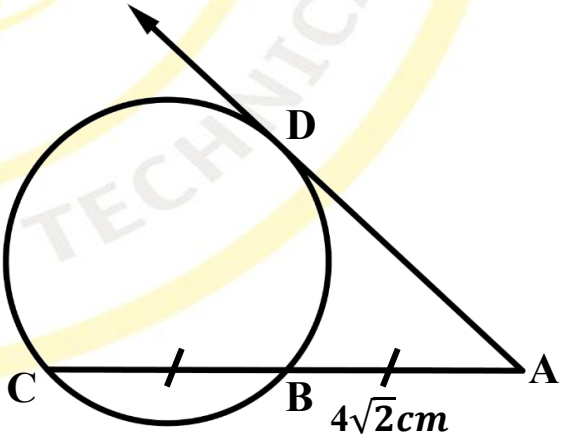
9) In the opposite figure:

A is a point outside a circle,
$\overrightarrow{AD}$ is a tangent to the circle
$\overline{AC}$ intrsects the circle at B, C
$AD = 8cm, AB = BC$
Find the length of $\overline{AB}$.



10) In the opposite figure:

A is appoint outside a circle,
$\overrightarrow{AD}$ is a tangent to the circle
$\overline{AC}$ intrsects the circle at B, C,
$AB = BC = 4\sqrt{2}cm$
Find the length of $\overline{AD}$.



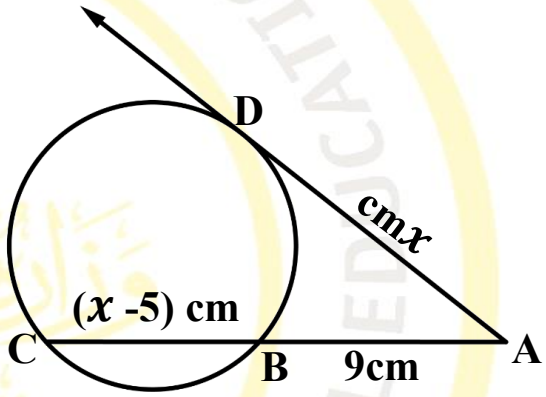
First Group

(1) If L, M are the two roots of the equation $x^2 - 8x + 3 = 0$,
find the quadratic equation of roots: $L^2 + 1, M^2 + 1$.

(2) Find the maxiumum, and minimum values of the function: $y = 3sinx$,
then deduce its range.

(3) Find the maxiumum, and minimum values of the function: $y = 2cosx$,
then deduce its range.

(4) In the opposite figure:
A is a point outside a circle,
$\overrightarrow{AD}$ is a tangent to the circle
$\overline{AC}$ intrsects the circle at B, C
$AB = 9cm, BC = (x - 5)cm$
AD = x cm, find the numerical value of x



(5) ABD is a triangle, C ∈ $\overline{AD}$ where AC = 4cm, DC = 12cm
If AB = 8 cm. Prove that $\overline{BA}$ is a tangent to the circle passes by C, B, D.

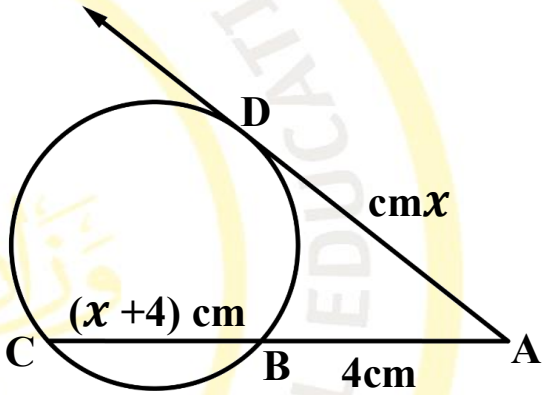
Second Group

(1) If L, M are the two roots of the equation $x^2 - 6x + 4 = 0$, find the quadratic equation of roots: $L^2 + 2, M^2 + 2$

(2) Find the maxiumum, and minimum values of the function: $y = 4sinx$, then deduce its range.

(3) Find the maxiumum, and minimum values of the function: $y = 3cosx$, then deduce its range.

(4) In the opposite figure:
A is a point outside a circle,
$\overrightarrow{AD}$ is a tangent to the circle
$\overline{AC}$ intrsects the circle at B, C
$AB = 4cm, BC = (x + 4)cm$
AD = x cm,
find the numerical value of x



(5) ABC is a triangle, D $\in \overline{BC}$, where DC = 5 cm, DB = 15 cm
If AC = 10 cm. Prove that $\overline{AC}$ is a tangent to the circle passes by B, A, D.

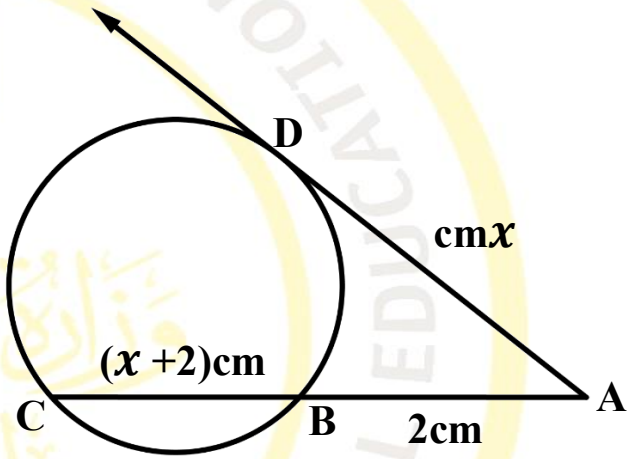
Third Group

(1) If L, M are the two roots of the equation: $x^2 - 6x + 4 = 0$,
find the quadratic equation of roots: $L^2 + 3, M^2 + 3$

(2) Find the maxiumum, and minimum values of the function: $y = 5sinx$,
then deduce its range.

(3) Find the maxiumum, and minimum values of the function: $y = 4cosx$,
then deduce its range.

(4) In the opposite figure:
A is appoint outside a circle,
$\overrightarrow{AD}$ is a tangent to the circle
$\overline{AC}$ intrsects the circle at B, C
$AB = 4cm, BC = (x + 2)cm$
AD = x cm,
find the numerical value of x



(5) ABC is a triangle, D $\in \overline{BC}$, where DC = 7 cm, DB = 9 cm.
If AB = 12 cm Prove that $\overline{AB}$ is a tangent to the circle passes by C, A, D.