



وزارة التربية والتعليم
الإدارة المركزية لتطوير المناهج
مكتب مستشار الرياضيات

برعاية معالي وزير التربية والتعليم السيد الأسناذ / محمد عبد اللطيف

ونوجيهات رئيس الإدارة المركزية لتطوير المناهج

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إدعاءات ونقييمات لمنهج الرياضيات

للسف الأول الثانوي

للعام الدراسي 2024 / 2025

إعداد

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مراجعة

أ / عصام الجزار

أ / عفاف جاد

ترجمة

أ / محسب علي

مراجعة الترجمة

أ / شريف البرهامي



الصف الأول الثانوي – الرياضيات – الأداء الصفّي – الأسبوع العاشر

(1) Determine the sign of the following function:

(a) $f(x) = 7$

(b) $f(x) = -4$

(2) Determine the sign of the following function:

(a) $f(x) = 2x + 4$

(b) $f(x) = 3 - 2x$

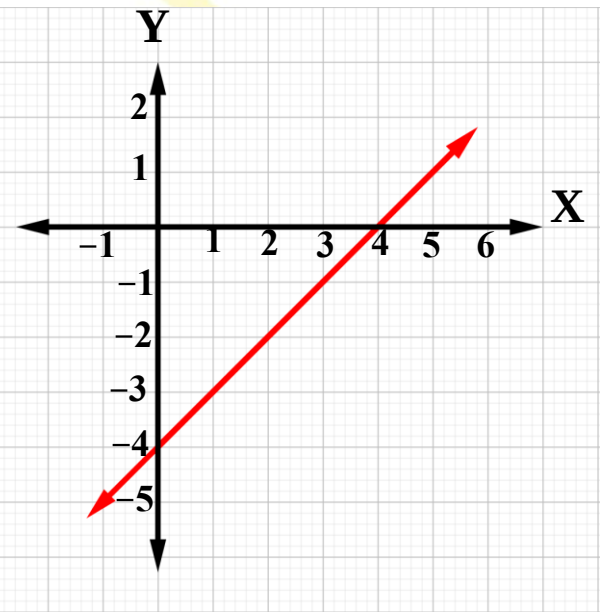
(3) The opposite figure represents a function of first degree in x

Complete the following:

(a) $f(x) = 0$, at $x \in \{...\}$

(b) $f(x)$ is positive in the Interval

(c) $f(x)$ is negative in the Interval



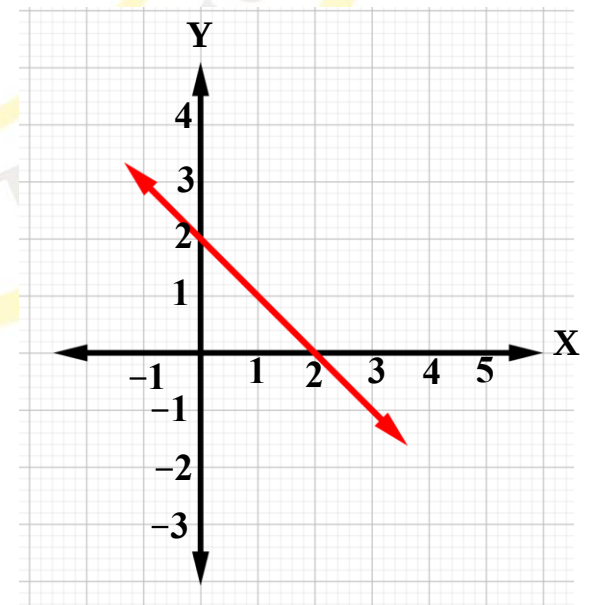
(4) The opposite figure represents a function of first degree in x

Complete the following:

(a) $f(x) = 0$, at $x \in \{...\}$

(b) $f(x) > \text{zero}$ when ...

(c) $f(x) < \text{zero}$ when ...



- (5) Graph the curve of the function $f: f(x) = 3\sin\theta$, where $\theta \in [0, 2\pi]$, From the graph, find the maximum and the minimum values of the function- the range of the function, its period.

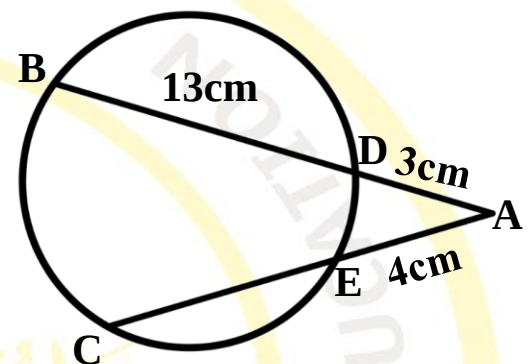
- (6) In the opposite figure:

$$\overrightarrow{BD} \cap \overrightarrow{CE} = \{A\}$$

$$AD = 3 \text{ cm}, DB = 13 \text{ cm.}$$

$$AE = 4 \text{ cm}$$

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



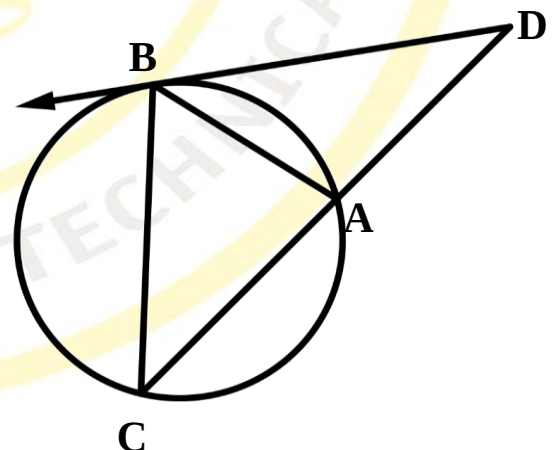
- (7) In the opposite figure:

$\overrightarrow{DB}$ is a tangent to the circle at B, $\overrightarrow{DC}$ is a secant to the circle at A, C respectively.

First: prove that: $\triangle DBA \sim \triangle DCB$

Second: if $DA = 4 \text{ cm}$, $AC = 5 \text{ cm}$,

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



- (8) Two similar triangles their areas are 64 cm^2 , 25 cm^2 , if the perimeter of the first triangle is 40 cm, find the perimeter of the other triangle.

- (9) In the opposite figure:

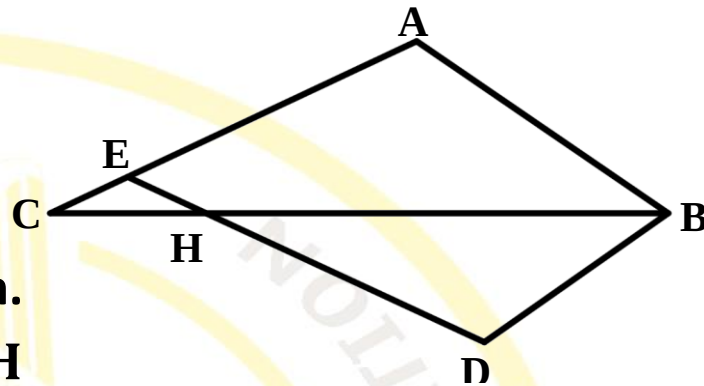
$$\overline{BC} \cap \overline{DE} = \{H\}, AB = 6 \text{ cm}$$

$$BC = 12 \text{ cm}, CA = 8 \text{ cm}$$

$$HC = 3 \text{ cm}, DB = 4.5 \text{ cm}, DH = 6 \text{ cm}.$$

Prove that first: $\triangle ABC \sim \triangle DBH$

Second: $\triangle EHC$ is an isosceles triangle.



- (10) In the opposite figure:

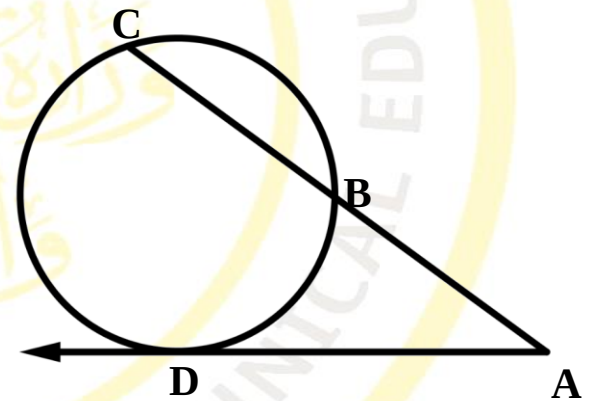
$\overrightarrow{AD}$ is a tangent to the circle

at D, $\overrightarrow{AC}$ is a secant to the circle
at B, C respectively.

Answer the following:

first: if $AC = 8 \text{ cm}$, $AB = 2 \text{ cm}$, find AD.

Second : if $AB = BC$, $AD = 2\sqrt{3} \text{ cm}$, find AC.





(11) In the opposite figure:

$L \in \overline{XY}$, where $XL = 4\text{cm}$

$LY = 8\text{cm}$, $M \in \overline{XZ}$,

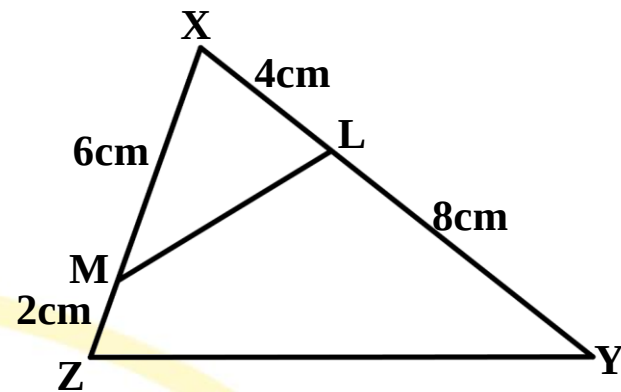
$XM = 6\text{cm}$, $MZ = 2\text{cm}$

Prove that:

First: $\triangle XLM \sim \triangle XZY$

Second: the figure $LYZM$ is a cyclic quadrilateral.

(The points L, Y, Z, M on a circle)



(12) In the opposite figure:

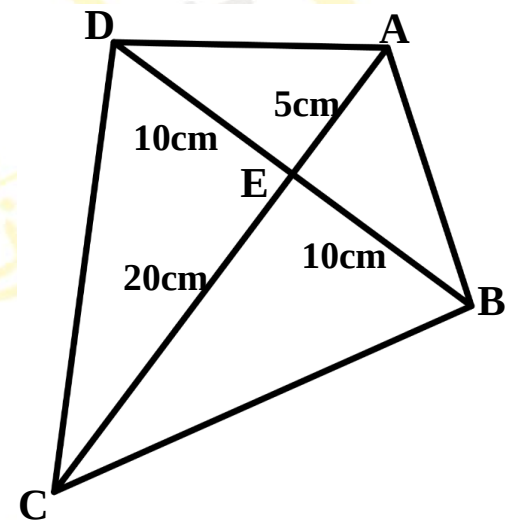
$ABCD$ is a quadrilateral

its diagonals intersect at E , where

$EA = 5\text{cm}$, $EC = 20\text{cm}$, $EB = ED = 10\text{cm}$.

Prove that $ABCD$ is a cyclic quad.

(the points A, B, C, D on a circle).



(13) In the opposite figure:

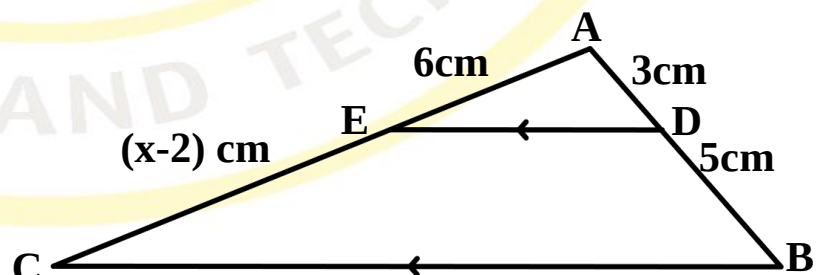
ABC is a triangle,

$E \in \overline{AC}$, $D \in \overline{AB}$

Where $\overline{DE} \parallel \overline{BC}$, $AD = 3\text{cm}$

$DB = 5\text{cm}$, $AE = 6\text{cm}$,

$EC = (x-2)\text{cm}$. Find the value of x .



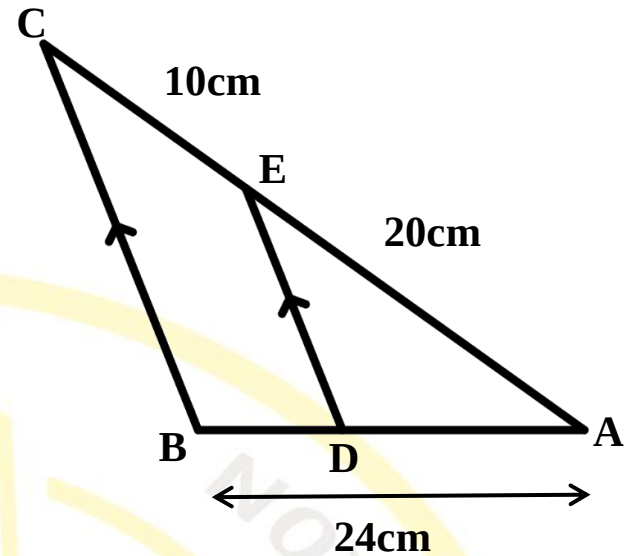
(14) In the opposite figure:

ABC is a triangle, $E \in \overline{AC}$, $D \in \overline{AB}$

Where $\overline{DE} \parallel \overline{BC}$, $AB = 24\text{cm}$

$AE = 20\text{cm}$, $EC = 10\text{cm}$.

Find the length of $\overline{DB}$



(15) In the opposite figure:

ABC is a triangle, $E \in \overline{BC}$, $D \in \overline{AB}$

Where $\overline{DE} \parallel \overline{AC}$, $EC = 10\text{ cm}$

$AD = 8\text{ cm}$, $DB = 12\text{ cm}$, $EB = (2x+5)\text{ cm}$

Find the value of x

