



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

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

وتوجيهات رئيس الإدارة المركزية للتعليم العام

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إشراف علمي
مستشار الرياضيات
أ/ منال عزقول

أداءات وتقييمات لمنهج الرياضيات

للسف الأول الثانوى **لغات**
الفصل الدراسى الأول
للعام الدراسى 2025 / 2026

الأسبوع العاشر

لجنة الإعداد

أ/ عفاف جاد

أ/ إيهاب فتحي

أ/ عصام الجزار

ترجمة

أ/ محاسب على

مراجعة

أ/ شريف البرهامى

١٠ الرياضيات لغات للصف الأول الثانوي الأداء الصفى الأسبوع العاشر ١٠

(1) Determine the sign of the following function:

(a) $f(x) = 3.5$

(b) $f(x) = -6$

(2) Determine the sign of the following function:

(a) $f(x) = 3x + 6$

(b) $f(x) = 5 - 2x$

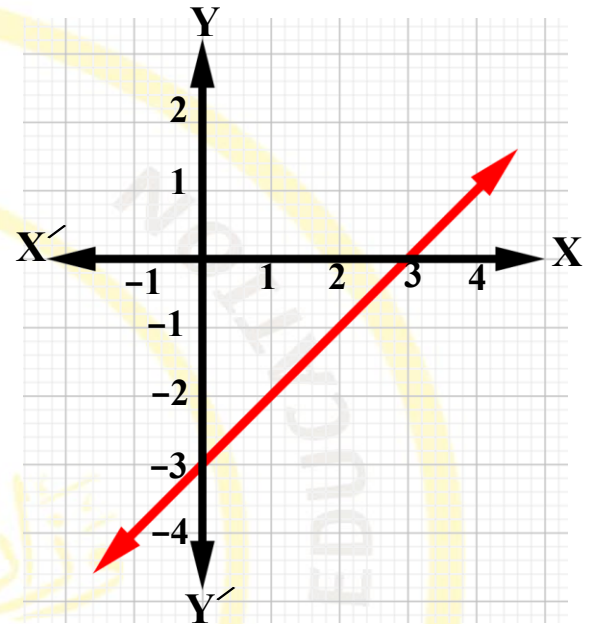
(3) The opposite figure represents a function of first degree in x

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



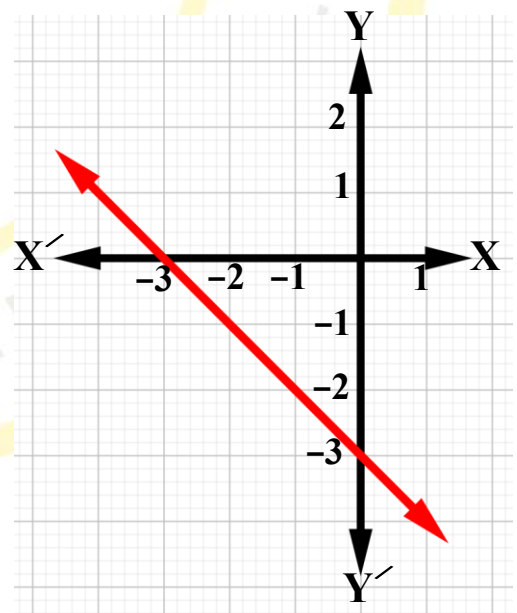
(4) The opposite figure represents a function of first degree in x

Complete the following:

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

(b) $f(x) > zero$ when

(c) $f(x) < zero$ when



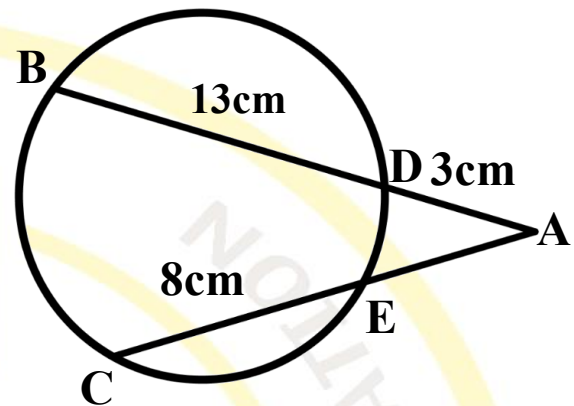
- (5) Graph the curve of the function $f(x) = 3\cos\theta$, where $\theta \in [0, 2\pi]$, from the graph, find the maximum and the minimum values of the function- the range of the function, its period.

- (6) In the opposite figure:

$$\overrightarrow{BD} \cap \overrightarrow{CE} = \{A\}, AD = 3 \text{ cm},$$

$$DB = 13 \text{ cm}, CE = 8 \text{ cm}$$

Find the length of $\overline{AE}$



- (7) In the opposite figure:

L is a point outside the circle,

$\overrightarrow{LZ}$ is a secant to the circle

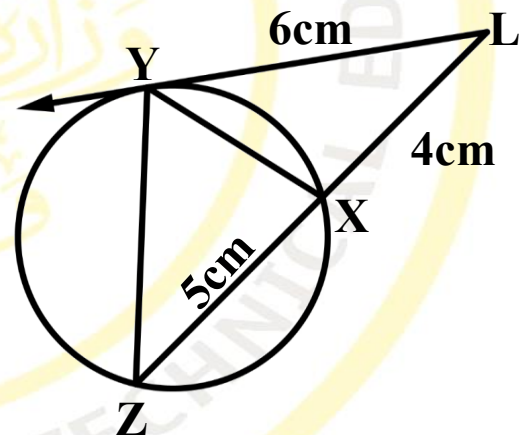
At X, Z respectively

$$\text{If } LY = 6\text{cm}, LX = 4\text{cm}, XZ = 5\text{cm}$$

First: prove that

$\overrightarrow{LY}$ is a tangent to the circle at Y

Second: $\triangle LYX \sim \triangle LZY$



- (8) Two similar polygons the ratio between their perimeters is 3: 2, if the area of the smaller polygon is 40 cm^2 , find the area of the greater polygon.

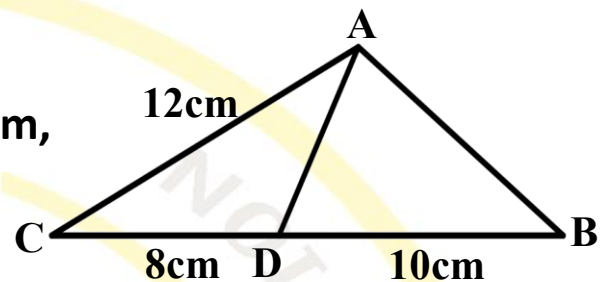
- (9) In the opposite figure:

ABC is a triangle, $D \in \overline{BC}$, where $AC = 12 \text{ cm}$,

$BD = 10 \text{ cm}$, $CD = 8 \text{ cm}$.

First: prove that $\triangle ABC \sim \triangle DAC$

Second: the ratio between the areas of $\triangle ABC$, $\triangle DAC$



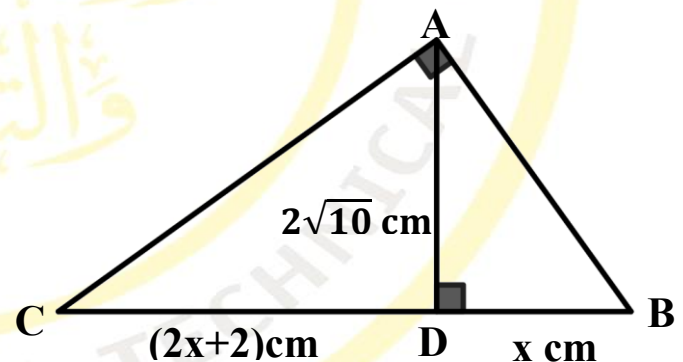
- (10) In the opposite figure:

BAC is a right angled triangle at A

$\overline{AD} \perp \overline{BC}$, $AD = 2\sqrt{10} \text{ cm}$,

$BD = x \text{ cm}$, $CD = (2x + 2) \text{ cm}$

Find the value of x



(11) In the opposite figure:

$X \in \overline{AB}$, where $AX = 4\text{cm}$

$XB = 6\text{cm}$, $Y \in \overline{AC}$,

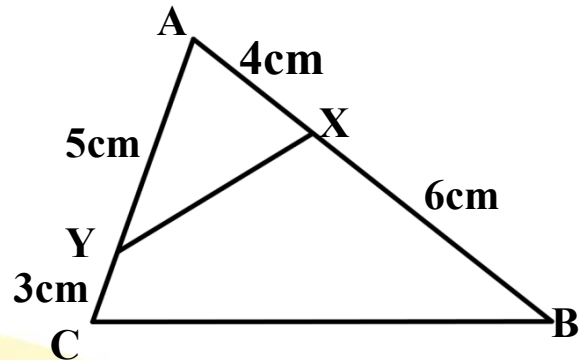
$AY = 5\text{cm}$, $YC = 3\text{cm}$

Prove that:

First: a) $\triangle AXY \sim \triangle ACB$

b) the figure XBCY is a cyclic quadrilateral.

Second: if area of triangle $AXY = 8\text{ cm}^2$,
find area of the figure XBCY.



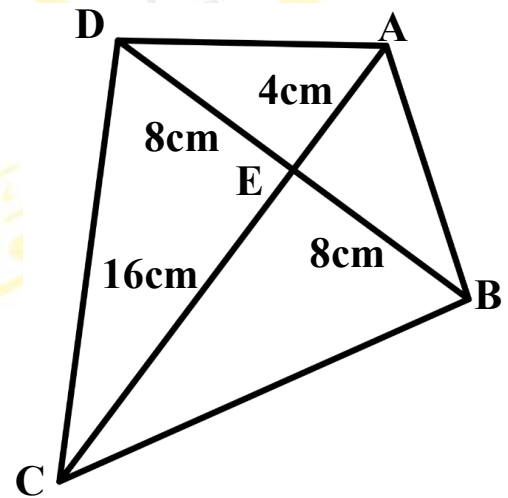
(12) In the opposite figure:

ABCD is a quadrilateral

its diagonals intersect at E, where

$EA = 4\text{cm}$, $EC = 16\text{cm}$, $EB = ED = 8\text{cm}$.

Prove that ABCD is a cyclic quad.



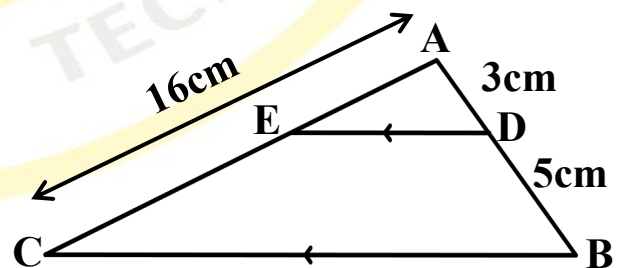
(13) In the opposite figure:

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

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

$DB = 5\text{ cm}$, $AC = 16\text{cm}$,

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



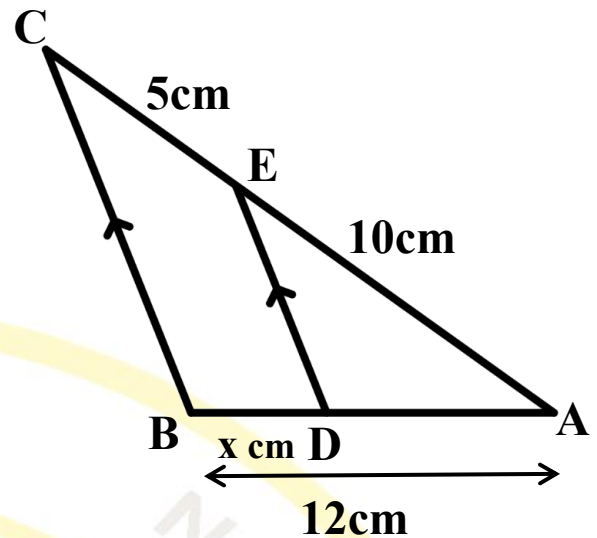
(14) In the opposite figure:

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

Where $\overline{DE} \parallel \overline{BC}$, $AB = 12\text{cm}$

$AE = 10\text{cm}$, $EC = 5\text{cm}$, $BD = x\text{ cm}$

Find the value of x



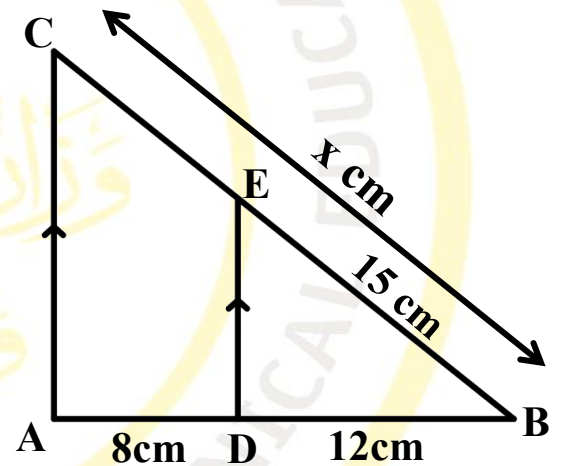
(15) In the opposite figure:

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

Where $\overline{DE} \parallel \overline{AC}$, $CB = x\text{ cm}$

$AD = 8\text{ cm}$, $DB = 12\text{ cm}$, $EB = 15\text{ cm}$

Find the value of x



⑩ الرياضيات لغات للصف الأول الثانوي الأداء المنزلي الأسبوع العاشر ⑩

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

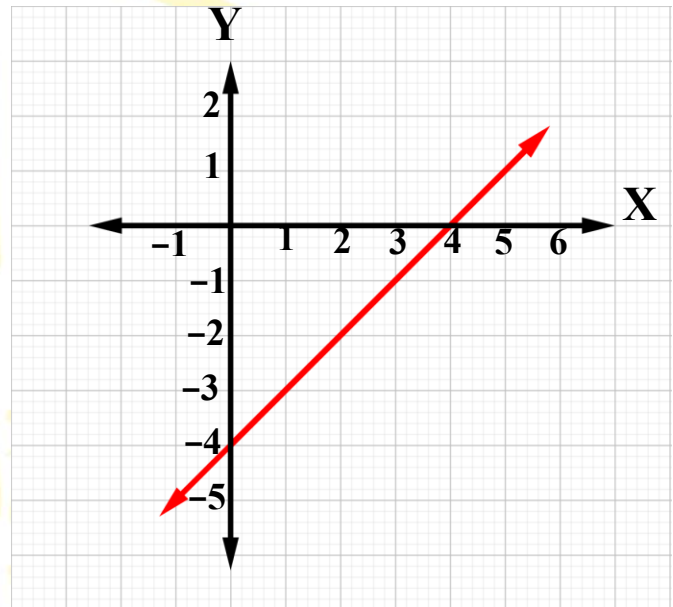
(b) $f(x) = 3 - 2x$

(3) The opposite figure represents a function of first degree in x . Complete the following:

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

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

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

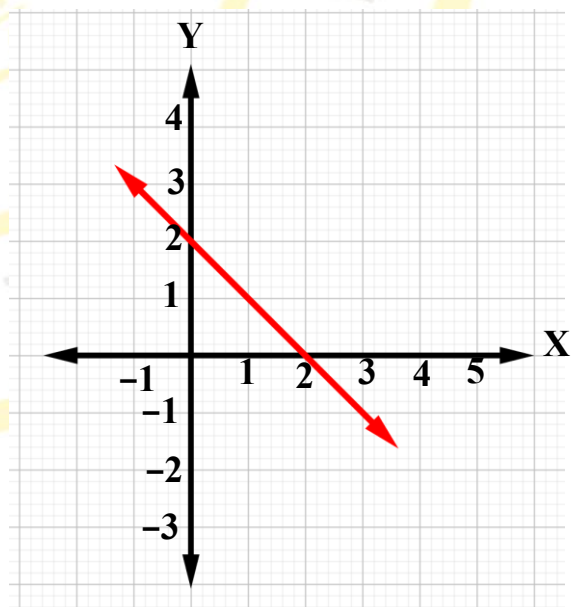


(4) The opposite figure represents a function of first degree in x . Complete the following:

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

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

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



- (5) Graph the curve of the function $f(x) = 3\sin\theta$, 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.

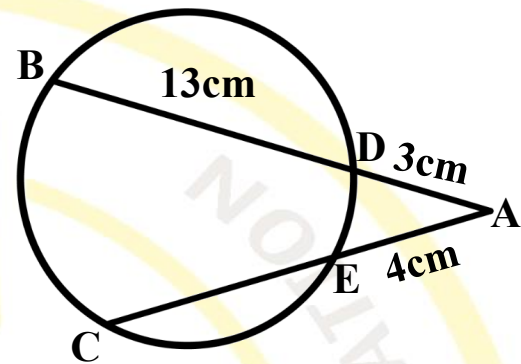
- (6) In the opposite figure:

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

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

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

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



- (7) In the opposite figure:

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

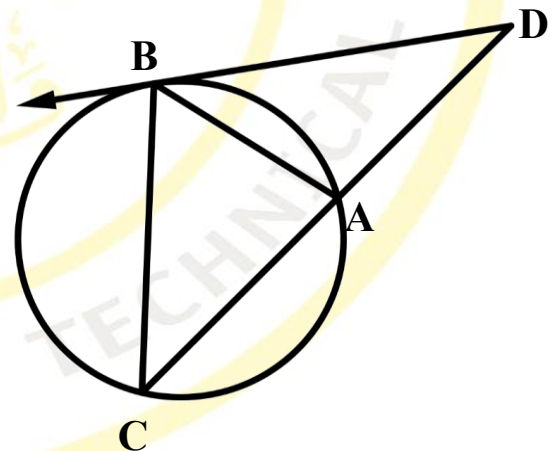
at B, $\overrightarrow{DC}$ is a secant to the circle

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:

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

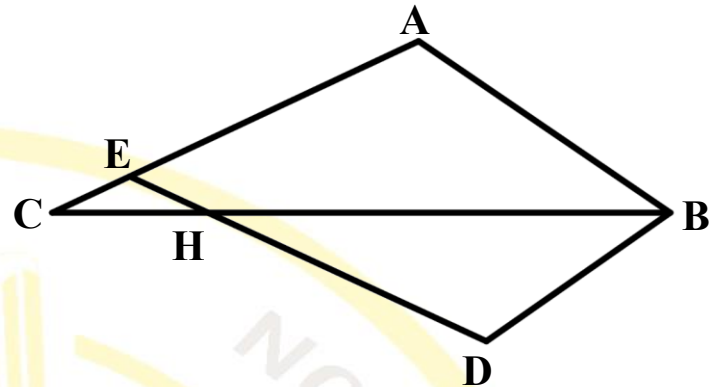
$$BC = 12 \text{ cm}, CA = 8 \text{ cm}$$

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

Prove that:

$$\text{First: } \triangle ABC \sim \triangle DBH$$

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



(10) In the opposite figure:

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

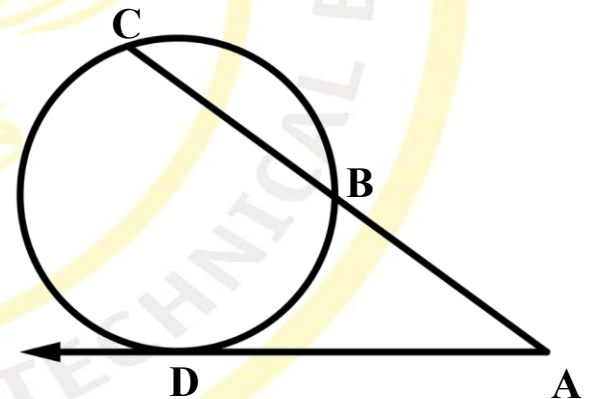
at D, $\overrightarrow{AC}$ is a secant to the circle

at B, C respectively.

Answer the following:

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

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



(11) In the opposite figure:

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

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

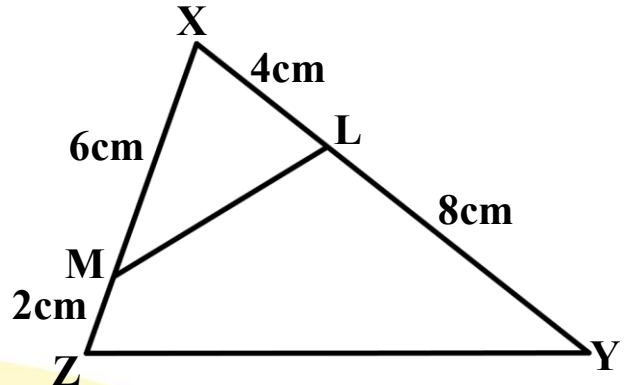
$XM = 6\text{cm}$, $MZ = 2\text{cm}$

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:

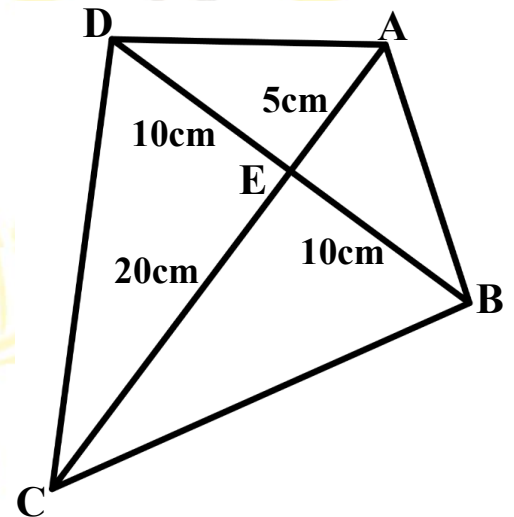
$ABCD$ is a quadrilateral

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:

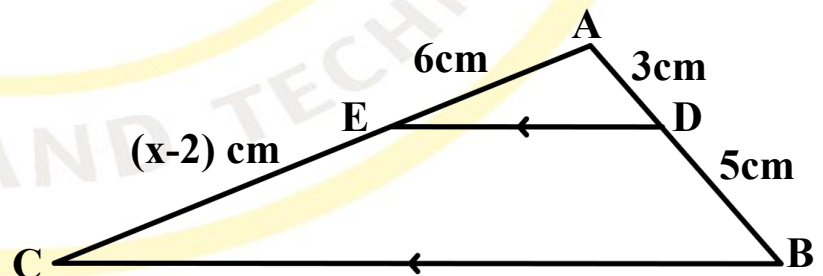
ABC is a triangle,

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

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 .



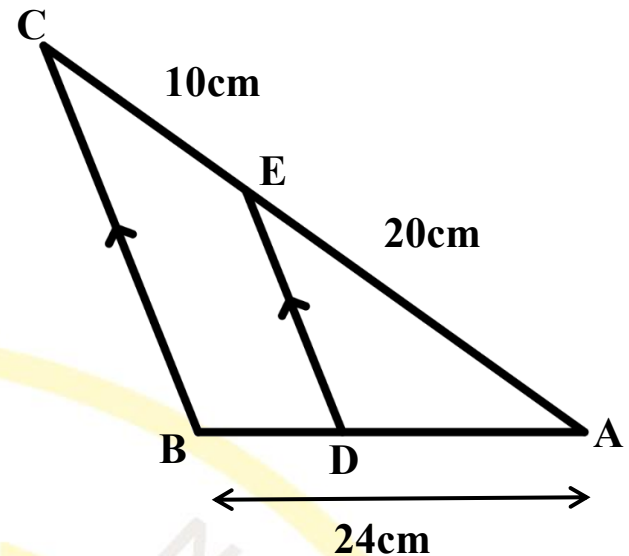
(14) In the opposite figure:

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

