

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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إشراف علمي

مستشار الرياضيات

أ/ منال عزقول

أداءات وتقييمات لمنهج الرياضيات

للصف الأول الثانوي لغات

الفصل الدراسى الأول

للعام الدراسي ٢٠٢٦ / ٢٠٢٧

الأسبوع الرابع

لجنة الإعداد

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

أ/ عصام الجزار أ/ نفيسة رمضان

ترجمة

أ/ محسب على

مراجعة

أ/ شريف البرهامى أ/ محمود درويش

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(1) Detrmine the type of the roots of each of the following equations:

a) $x^2 - 10x + 25 = 0$ b) $x^2 - 2x + 5 = 0$

c) $12x - 4x^2 = 9$ d) $x(x - 2) = 5$

(2) Prove that the roots of the equation: $x^2 - 11x + 5 = 0$,
are complex and not real, and then by using the general formula
find these two roots.

(3) Find the real value of k, which makes the two roots of the equation:
$4x^2 - 12x + k = 0$ are equal, then find this two roots.

(4) Find the length of the arc in a circale of redius length 6 cm. which opposite to a central angle of measure $\frac{7\pi}{6}$ to the nearest two decimal place.

(5) Find the degree and the redian measure of a central angle opposite to an arc of length (L) in a circale of length (r) in the following cases:

a) L = 10 cm, r = 8 cm b) L = π cm, r = 6 cm

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(6) In the opposite figure:

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

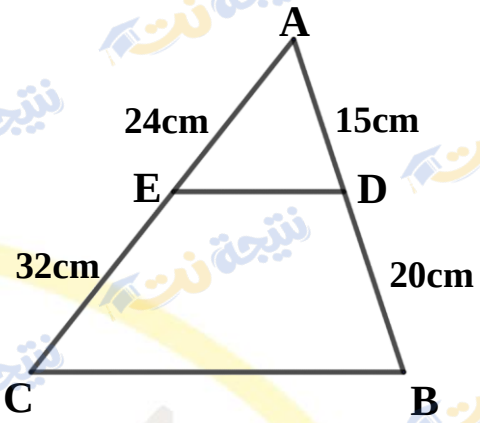
AD = 15 cm, AE = 24 cm,

DB = 20 cm, EC = 32 cm,

Prove that:

Firest : $\triangle ADE \sim \triangle ABC$

Second: $\overline{DE} \,//\, \overline{BC}$



(7) In the opposite figure:

$\overline{AB} \cap \overline{CD} = \{E\}$

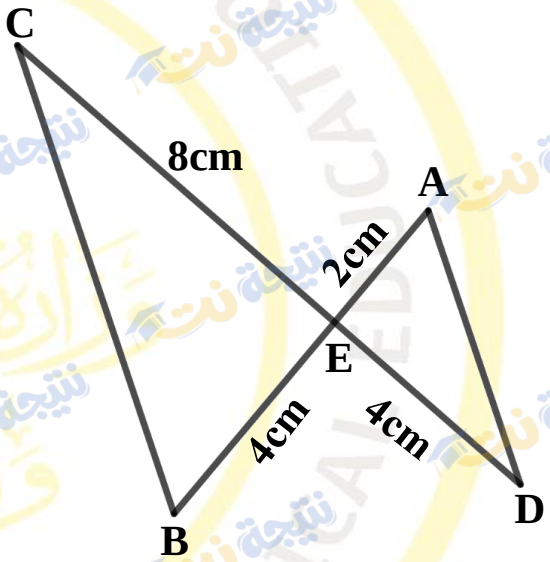
AE = 2 cm, EB = ED = 4 cm,

CE = 8 cm.

Prove that:

First: $\triangle AED \sim \triangle BEC$

Second: $\overline{AD} \,//\, \overline{CB}$



(8) In the opposite figure:

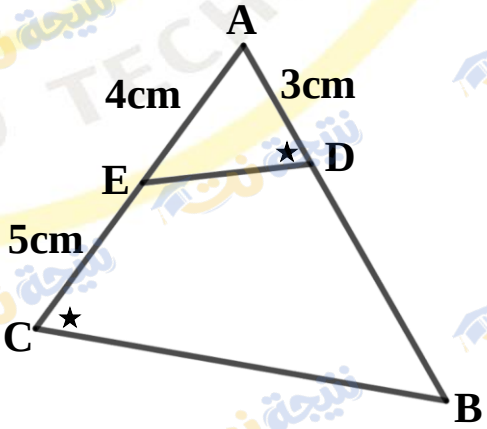
ABC is a triangle, $D \in \overline{AB}$, $E \in \overline{AC}$,

$m(\angle ADE) = m(ACB)$,

AD =3 cm, AE = 4 cm, CE = 5 cm

First: Prove that: $\triangle AED \sim \triangle ABC$

Second: Find the length of $\overline{BD}$



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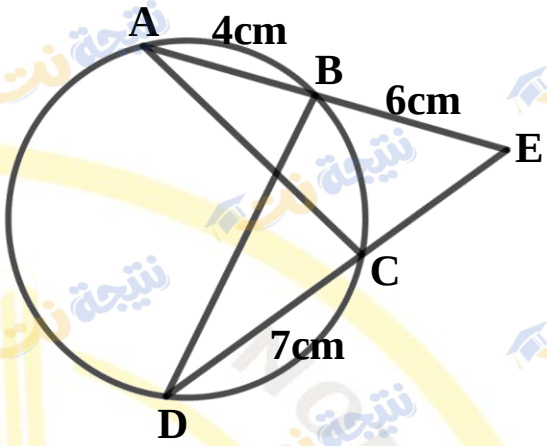
(9) In the opposite figure:

$\overrightarrow{AB} \cap \overrightarrow{DC} = \{E\}$, AB = 4 cm,

DC = 7 cm, BE = 6 cm.

First: prove that: $\triangle ACE \sim \triangle DBE$

Second: Find the length of $\overline{CE}$



(10) ABC is a right angled triangle at A, $\overrightarrow{AD} \perp \overline{BC}$ to intersect it at D,

If BD : DC = 1 : 2, AD = $6\sqrt{6}$ cm.

Find the length of $\overline{BD}, \overline{AB}, \overline{AC}$

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(1) Detrmine the type of the roots of each of the following equations:

a) $x^2 - 4x + 2 = 0$ b) $x^2 - 12x + 36 = 0$

c) $7x + 4x^2 = -9$ d) $x(x + 5) + 3 = 0$

(2) Prove that the roots of the equation: $2x^2 - 3x + 2 = 0$ are complex and not real, and then by using the general formula find these two roots.

(3) Find the real value of k, which makes the two roots of the equation: $3x^2 - 6x + k = 0$ are equal, then find this two roots.

(4) Find the length of the arc in a circale of redius length 6 cm. which opposite to a central angle of measure $\frac{\pi}{6}$ to the nearest two decimal place.

(5) Find the degree and the redian measure of a central angle opposite to an arc of length (L) in a circale of length (r) in the following cases:

a) L = 10 cm, r = 5 cm b) L = π cm, r = 10 cm

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6) In the opposite figure:

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

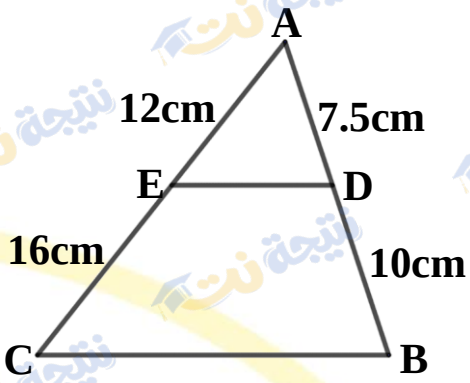
AD = 7.5 cm, AE = 12 cm,

DB = 10 cm, EC = 16 cm,

Prove that:

First: △ ADE ~△ ABC

Second: $\overline{DE}$ // $\overline{BC}$



(7) In the opposite figure:

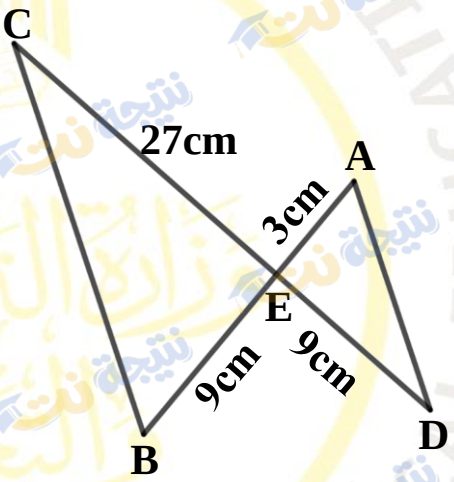
$\overline{AB} \cap \overline{CD} = \{E\}$

AE = 3 cm, EB = ED = 9 cm,

CE = 27 cm.

First: Prove that △ AED ~△ BEF

Second: If AD = 11 cm, find BC.



(8) In the opposite figure:

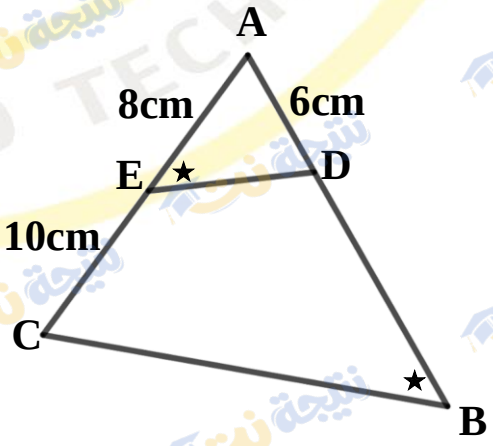
ABC is a triangle, D ∈ $\overline{AB}$, E ∈ $\overline{AC}$,

m(∠AED) = m(ABC),

AD = 6 cm, AE = 8 cm, CE = 10 cm

First : Prove that: △ ADE ~△ ACB

Second:find the length of $\overline{BD}$



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(9) In the opposite figure:

$\overline{AB}$, $\overline{DC}$ are two chords of circle, $\overrightarrow{AB} \cap \overrightarrow{DC} = \{E\}$,

AB = 2 cm, CD = 3.5 cm, BE = 3 cm,

First: prove that: $\triangle ADE \sim \triangle CBE$

Second find the length of $\overline{CE}$

(10) In the opposite figure:

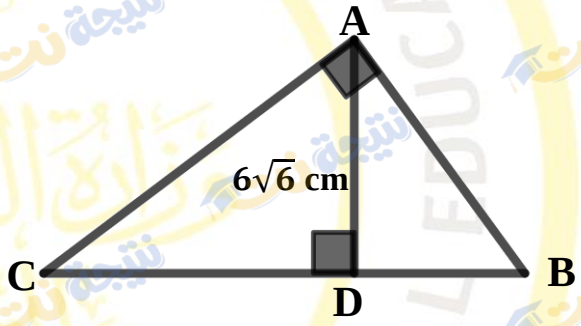
ABC is a right angled triangle at A,

$\overrightarrow{AD} \perp \overline{BC}$ to intersect it at D,

if BD : DC = 1 : 2, AD = $6\sqrt{6}$ cm.

Find:

the length of $\overline{BD}$, $\overline{AB}$ and $\overline{AC}$



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First Group

(1) Detrmine the type of the roots of the equations:

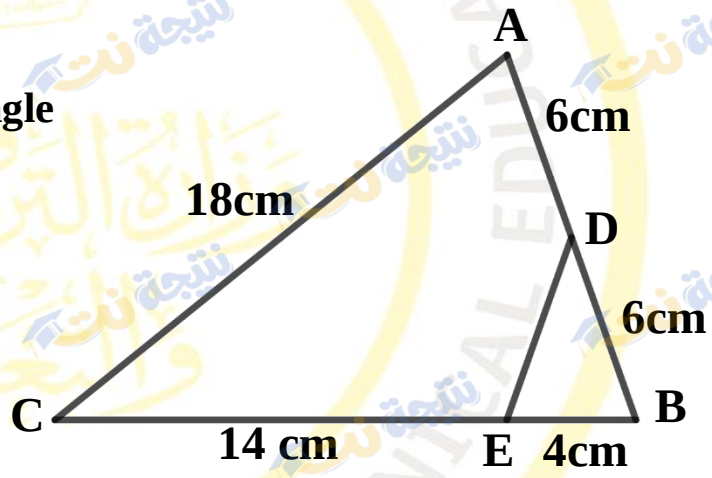
$$(x-2)+x(x-3)=0$$

(2) Find the real value of k, which makes the two roots of the equation: $x^2-kx+9=0$ are equal, then find these two roots.

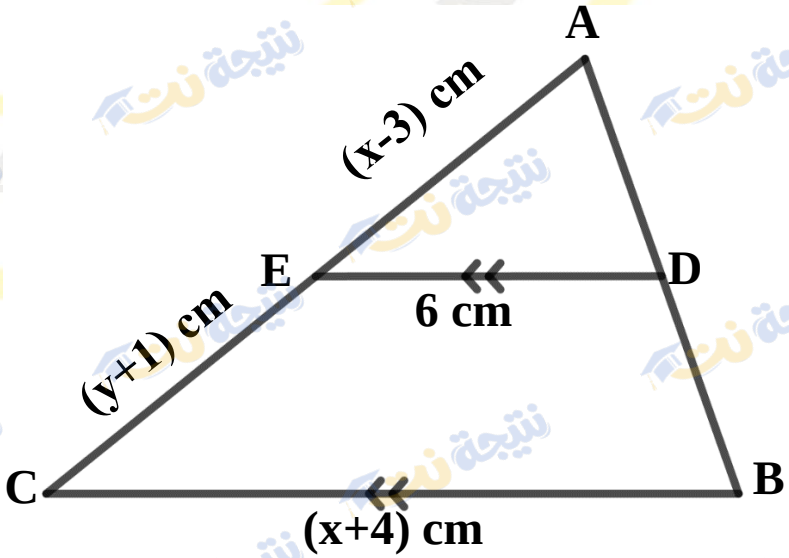
(3) The measure of an angle of a triangle is 60^0 and the measure of another angle is $\frac{\pi}{4}$, find the degree and redian measure of the third angle

(4) In the opposite figure: ABC is a triangle
AC = 18 cm, $D \in \overline{AB}$, $E \in \overline{BC}$

Where AD =DB = 6 cm
BE = 4 cm, EC = 14 cm
Find yhe length of $\overline{DE}$



(5) In the opposite figure:
ABC is a triangle,
BC = (x+4)cm
$\overline{DE}$ // $\overline{BC}$, AD = $\frac{1}{2}$ AB
DE = 6 cm, AE = (x - 3)cm
CE = (y + 1) cm
Find x + y



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Second Group

(1) Detrmine the type of the roots of the equations:

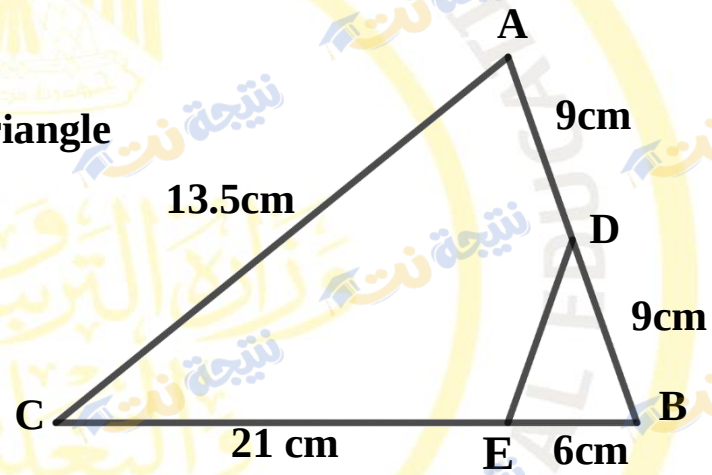
$$(x + 2) + x(x - 5) = 0$$

(2)Find the real value of k, which makes the two roots of the equation $x^2 - kx + 4 = 0$ are equal, then find these two roots.

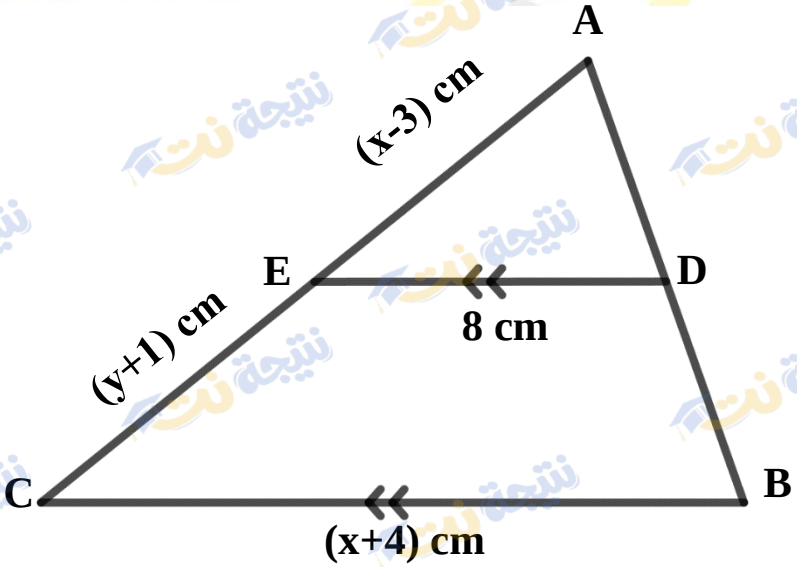
(3)The measure of an angle of a triangle is 70^0 and the measure of another angle is $\frac{\pi}{4}$ find the degree and redian measure of the third angle

(4) In the opposite figure: ABC is a triangle
AC = 13.5 cm, $\in \overline{AB}$, E $\in \overline{BC}$,

where AD =DB = 9 cm
BE = 6 cm, EC = 21 cm
Find yhe length of $\overline{DE}$



(5)In the opposite figure:
ABC is a triangle,
BC = (x+4)cm
, AD = $\frac{1}{2}$ $\overline{ABDE}$ // $\overline{BC}$
DE = 8 cm, AE = (x - 3)cm
CE = (y + 1) cm
Find: x + y



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Third Group

(1) Detrmine the type of the roots of the equations:

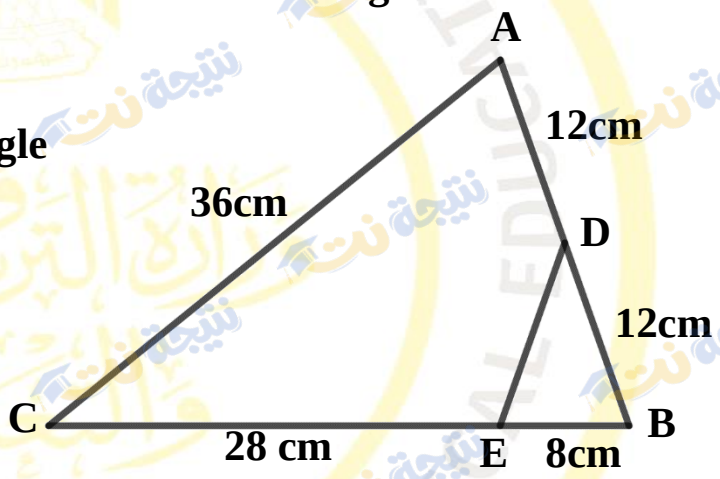
$$(x+1)+x(x-7)=0$$

(2) Find the real value of k, which makes the two roots of the equation $x^2-kx+1=0$ are equal, then find these two roots.

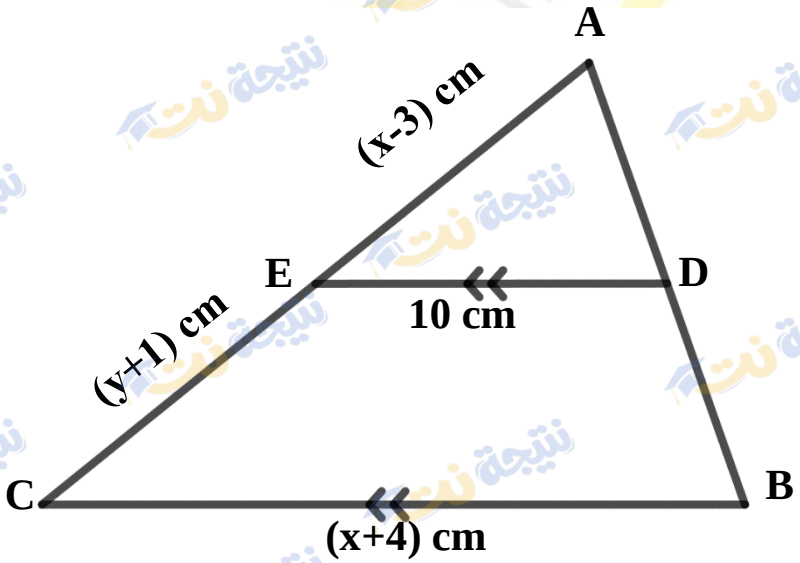
(3)The measure of an angle of a triangle is 80^0 and the measure of another angle is $\frac{\pi}{4}$ find the degree and redian measure of the third angle

(4) In the opposite figure: ABC is a triangle
AC = 36cm, $D \in \overline{AB}$, $E \in \overline{BC}$

Where AD =DB = 12 cm
BE = 8 cm, EC = 28 cm
Find yhe length of $\overline{DE}$



(5) In the opposite figure:
ABC is a triangle,
BC = (x+4)cm
$\overline{DE}$ // $\overline{BC}$, AD = $\frac{1}{2}$ AB
DE = 10 cm, AE = (x-3)cm
CE = (y+1) cm
Find x+y



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