
تصميم الدرس



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1+1

(2)

(5)

(4)

(1.99)



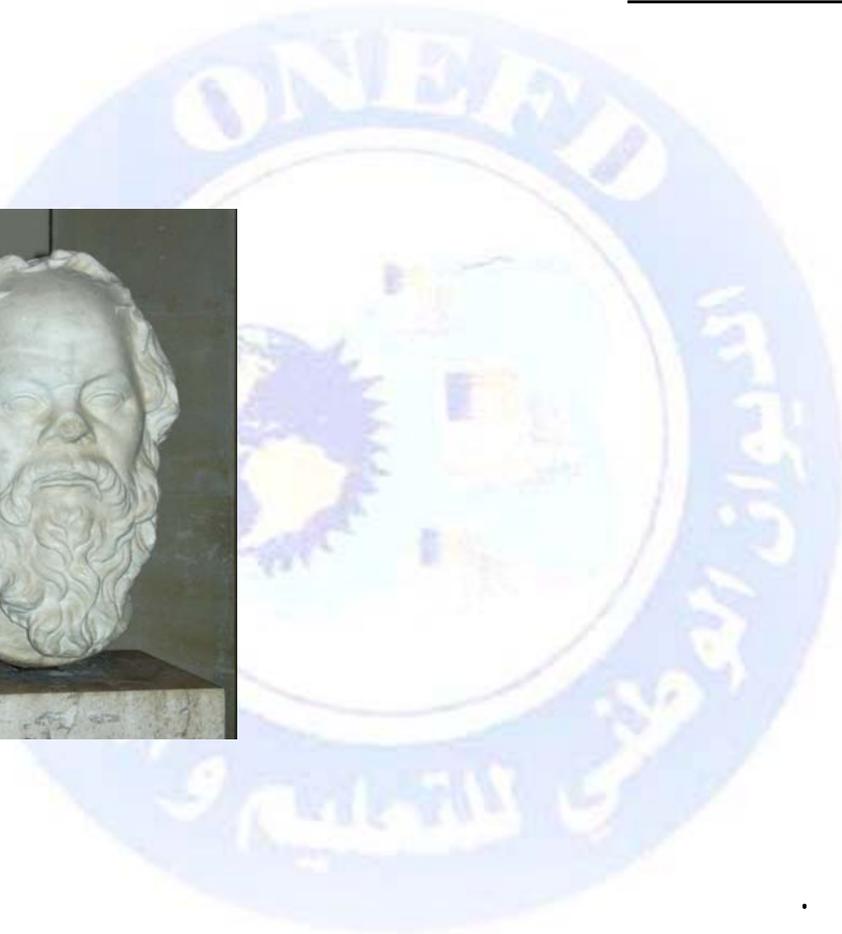
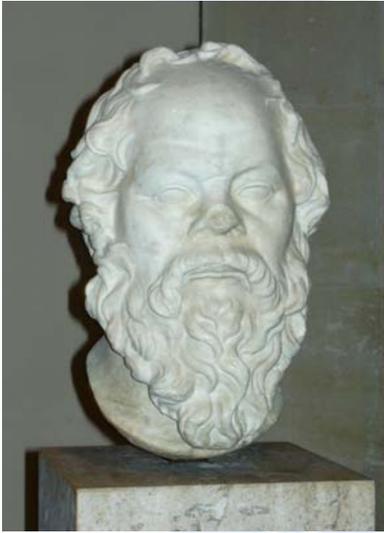
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(347-427) Platon

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(

¹ "Maïeutique" المشهور

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-1596)Descartes " "

(1650

" (Le bon sens est la chose du monde la mieux partagée) "

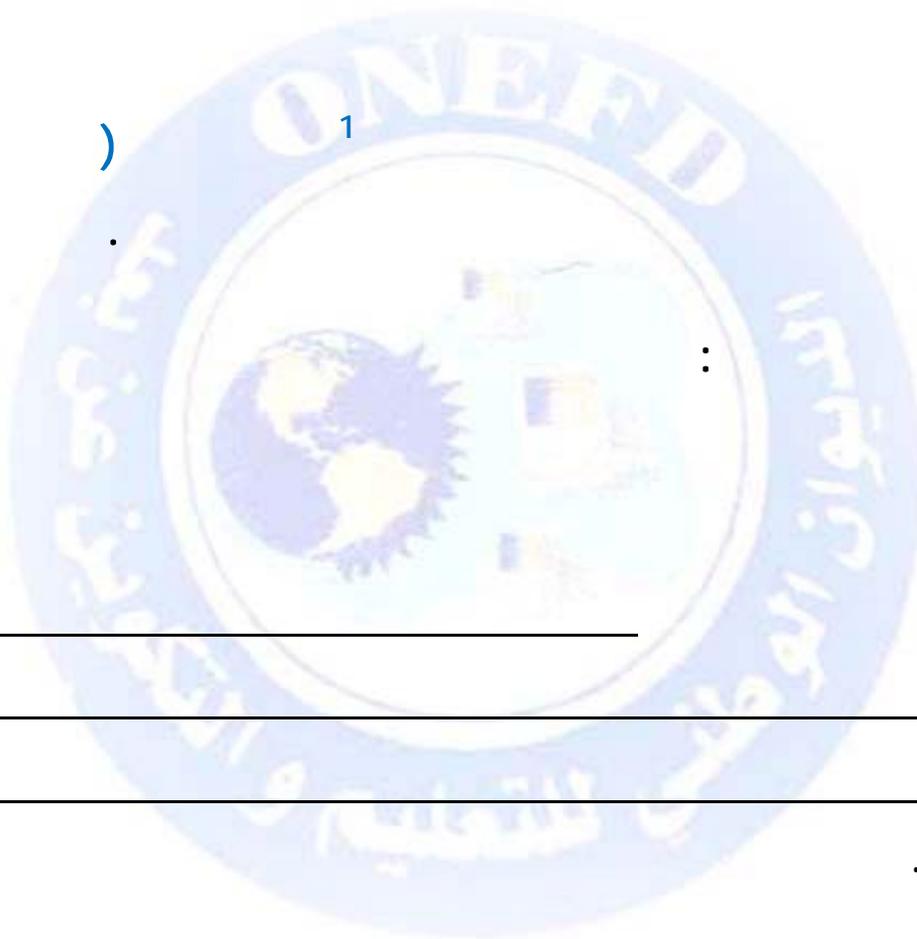
-1724) Kant³ " "

(1804

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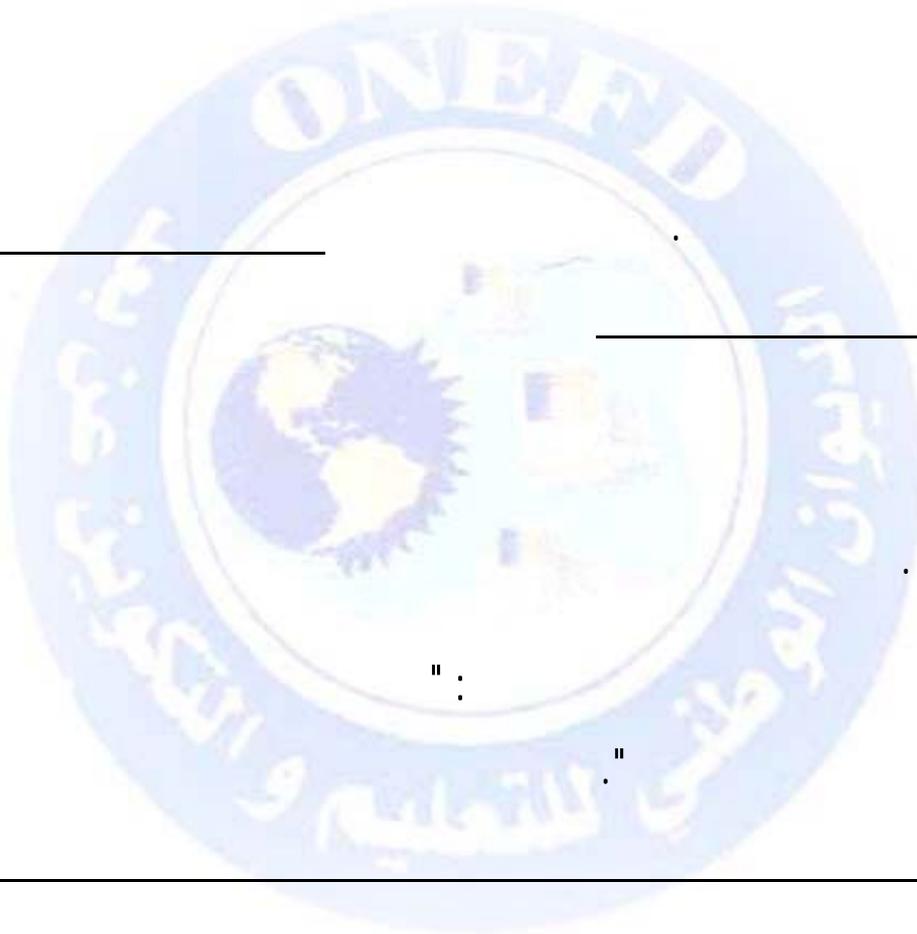
3



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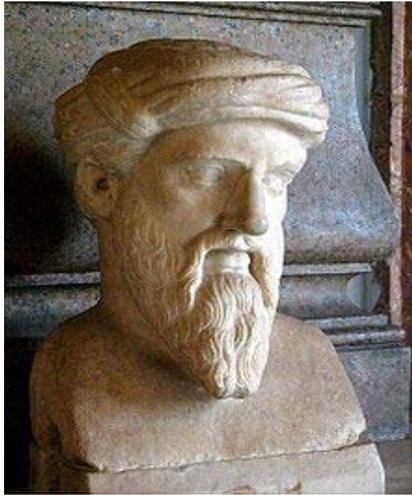
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(...

(mathématiques concrètes)

(mathématiques pures)



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497 – 580

¹(5 4 3)

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9

$$c^2 = a^2 + b^2 :$$

$$. 2 + 2 = 2$$

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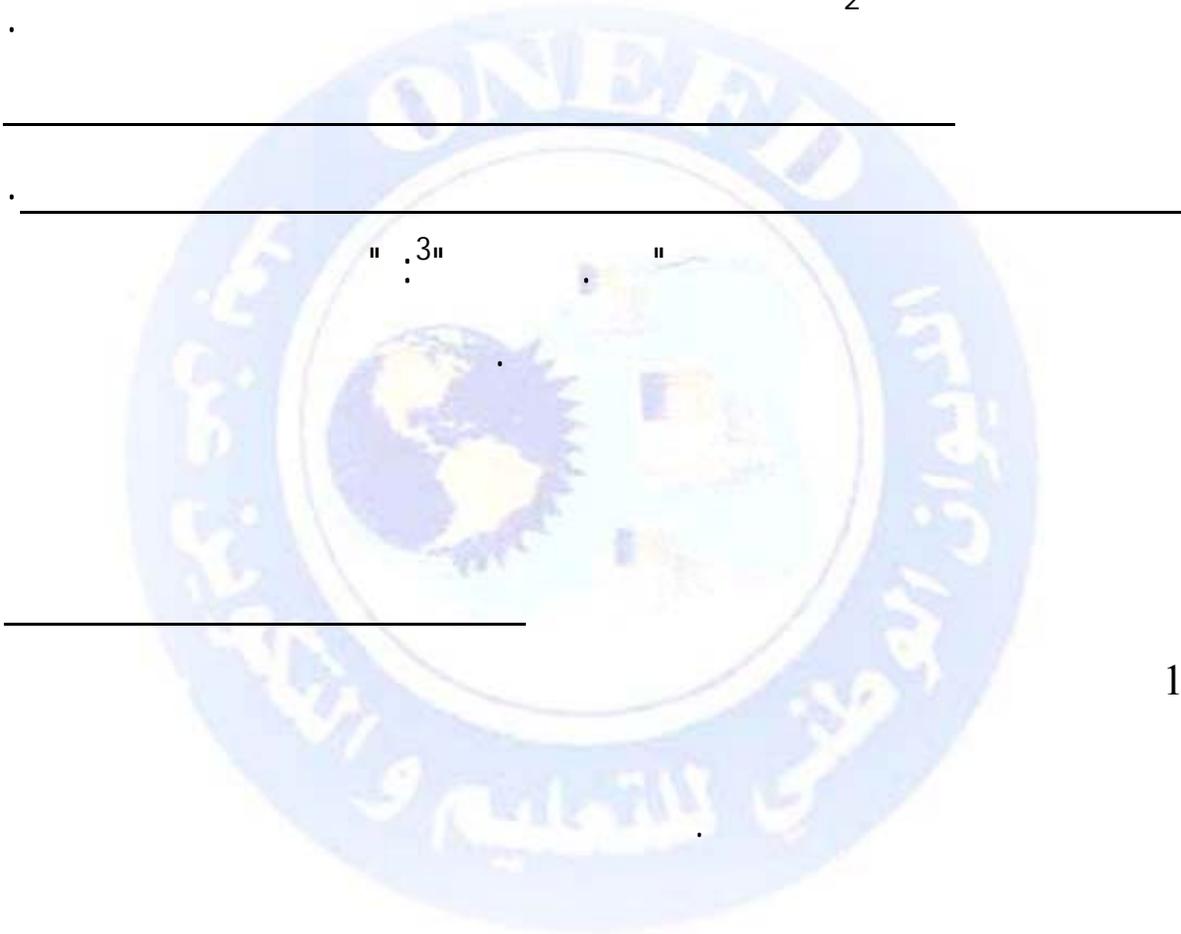
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"3"

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(... 1,2,3)

(...)

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(" ")

(1975-1890 Ferdinand Gonseth)

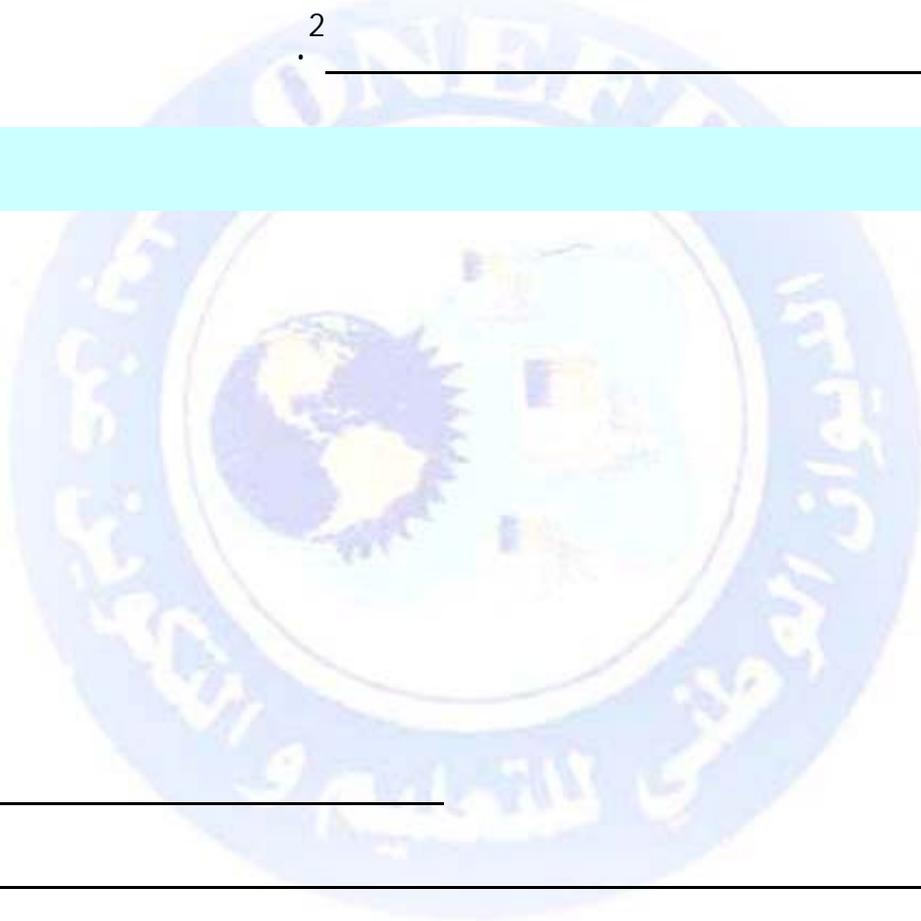
3

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II

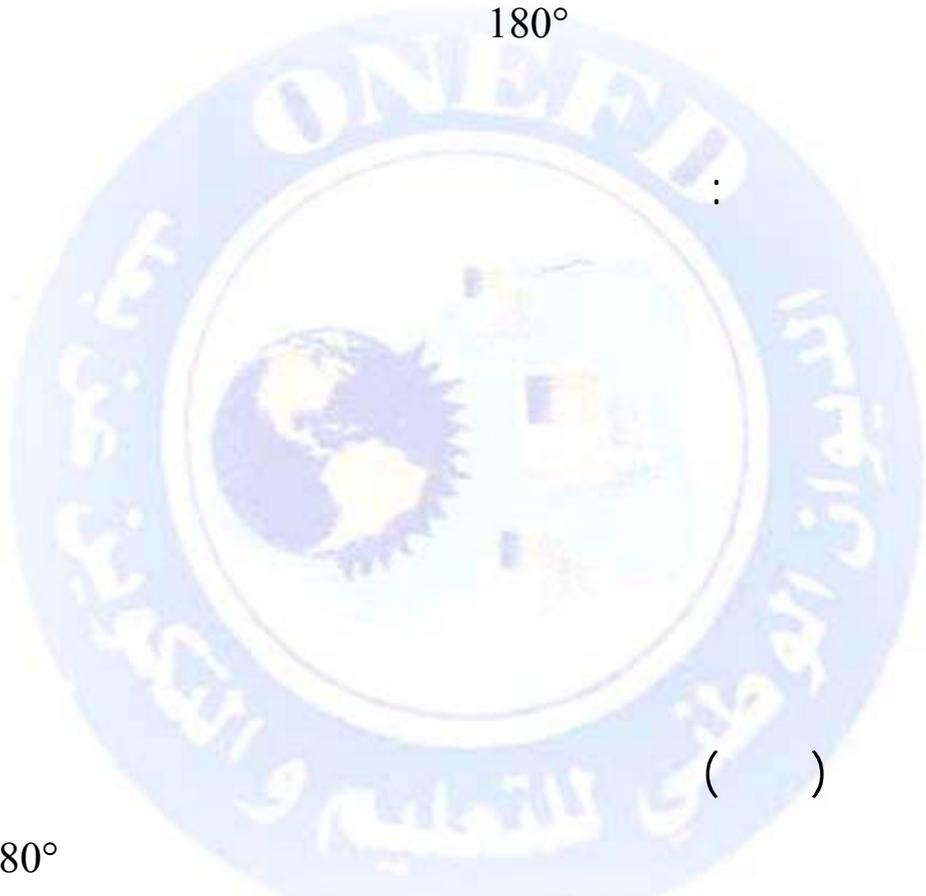


: :

: 1

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180°

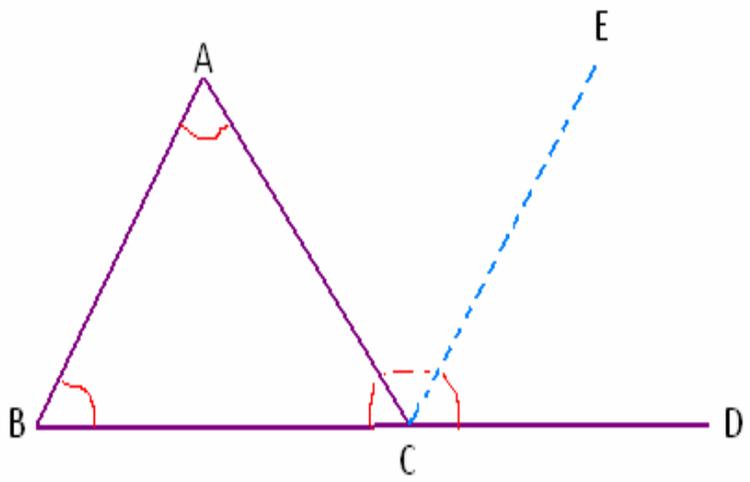


" :
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$.180^\circ$

<http://www.onefd.e>



(BC) : (C) (D)
 (CE) (AB)

: (BD) 1
 (BCA+ACE+ECD)

∠BAC + ∠BCA + ∠ABC : 2

180°

∠ABC = ∠ECD

∠BAC = ∠ACE

∠BCA

$$180^\circ = \angle ACB + \angle ACE + \angle ECD$$

وكانت $\angle ACB + \angle ACE + \angle ECD = \angle CBA + \angle CAB + \angle ACB$

$180^\circ = \angle CBA + \angle CAB + \angle ACB$ زوايا المثلث
<http://www.onefd.edu.dz> جميع الحقوق محفوظة ©



: Démonstration

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: (axiomes)

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(postulas)

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" " Euclide "

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(°180)

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(définitions)¹ 3

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$$X + 6 = 12 \quad :$$

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(6)

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$$X + 6 - 6 = 12 - 6$$

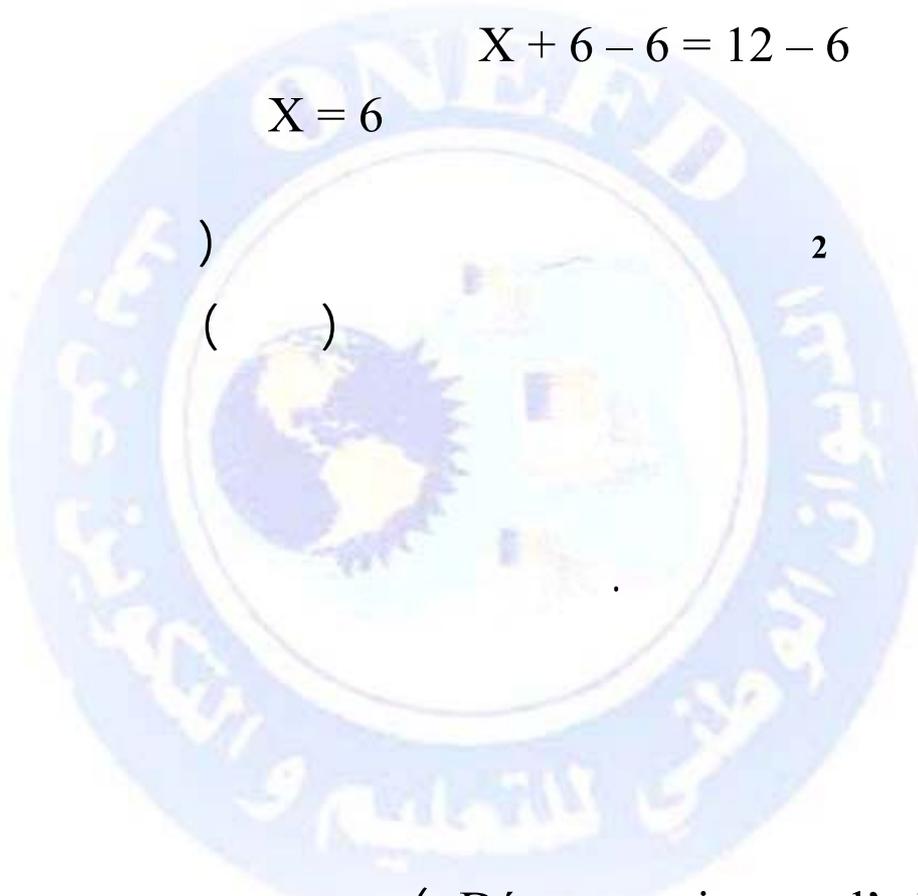
$$X = 6$$

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2

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.(Démonstration par l' absurde)

:

(B)

(A) :

(C)

(A) :

:

(C)

(B)

:

(C // A) :

(C // B) (B // A)

(C // A)

(C) (A)

(B)



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.(

$$\left\{ \begin{array}{l} X + 1 = 0 \\ X + 2 = 0 \end{array} \right.$$

$$X^2 + 3x + 2 = 0$$

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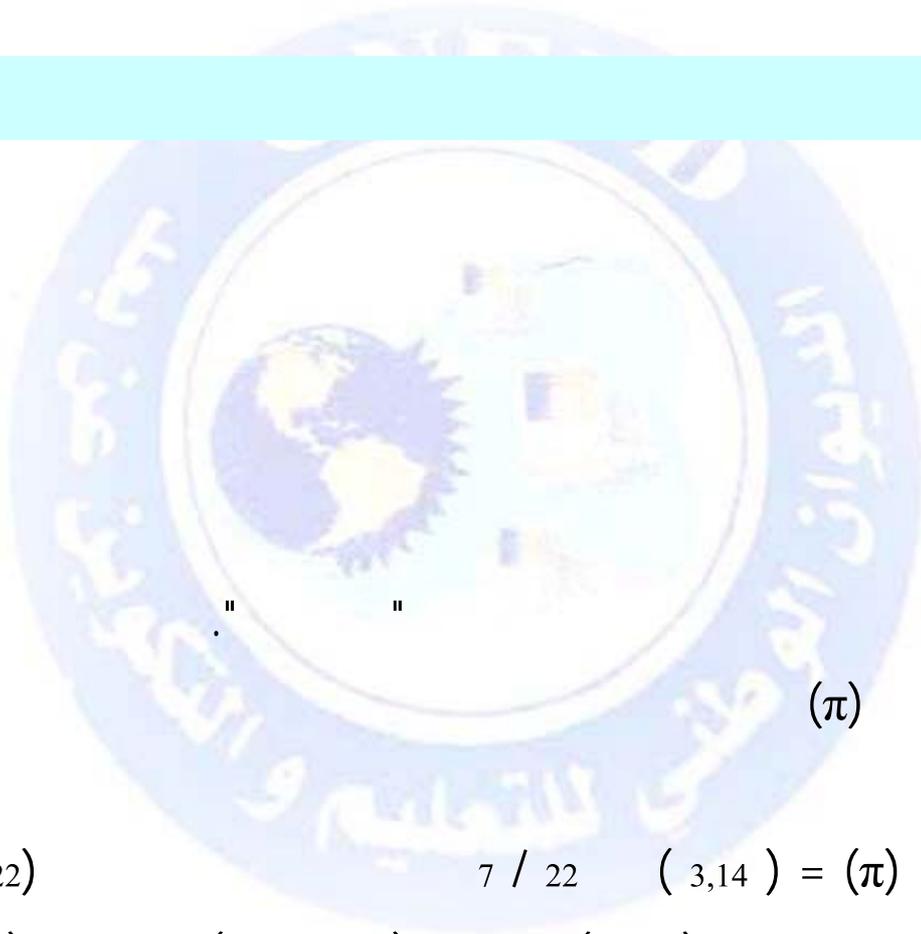


)

.(

III

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(π)

(22) $7 / 22 \quad (3,14) = (\pi) \quad :$

(22) $(7 \times 3,14) \quad (3,14) \quad (7)$

(22)

"

"

1" (N. I. Lobatchevski)

" 2

4

(1851)

3 (B. Riemann) "

" : (Bouligand) "



-1792)

1

.(1856

. (Courbature négative)

2

(1866 -1826)

3

<http://www.onefd.edu.dz>
.(Courbature positive)

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(=) (×) (-) (+) :

القائم Axiomatique

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I :

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II :

1. _____ :

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une hypothèse



3.



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لمحطات	التصميم	
طرح المشكلة	سلمة	
	برازا تفاعلا	
	ياغة المشكل	
محاولة حل المشكلة الجزء الأول		

حل المشكلة	إجابة	
	المشكلة	
	موقع	
	استنتاج	
	الجزء الثالث	(:)
	الجزء الثاني	