



سنة 2009  
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 الأستاذ فريخا  
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الدرس (1)

$a = \sqrt{(-7)^2} = |-7| = 7$  / 1 2  
 $b = \sqrt{9+25} = \sqrt{34}$  / 1 2  
 $= \sqrt{9} = 3$

$A = 6\sqrt{2} - 5\sqrt{3} + \sqrt{5}$  / 1 2  
 $= 6\sqrt{2} - 10\sqrt{2} + 5\sqrt{2}$   
 $A = \sqrt{2}$

$B = -\sqrt{3} + 3\sqrt{2} - 2\sqrt{2}$   
 $= -\sqrt{3} + 6\sqrt{3} - 6\sqrt{3}$   
 $B = -\sqrt{3}$

|A+B| / 1 2  
 $|A+B| = |\sqrt{2} - \sqrt{3}|$   
 $= \sqrt{3} - \sqrt{2}$





$$C = \sqrt{2} - (-\sqrt{3} + \frac{1}{2}) - 2 - (\frac{3}{2} + \sqrt{2})$$

$$= \sqrt{2} + \sqrt{3} - \frac{1}{2} - \frac{2^2 - 3}{2} - \sqrt{2}$$

$$C = \sqrt{3} - 4$$

$$D = x - (\frac{1}{4} + \sqrt{2} + x) - (\sqrt{3} + x) - (-0)$$

$$= x - \frac{1}{4} - \sqrt{2} - x - \sqrt{3} - x + \frac{1}{4}$$

$$D = -\sqrt{3} - x$$

$$|C| = |\sqrt{3} - 4|$$

$$= 4 - \sqrt{3}$$

$$C \cdot D = 1$$

$$(4 + \sqrt{3})(-\sqrt{3} - x) = 1$$



$$\begin{aligned}
 x &= \frac{(4 - 4\sqrt{3})(4 + \sqrt{3})}{4^2 - \sqrt{3}^2} \\
 &= \frac{(4 - 4\sqrt{3})(4 + \sqrt{3})}{16 - 3} \\
 &= \frac{(4 - 4\sqrt{3})(4 + \sqrt{3})}{13} \\
 &= \frac{16 - 4\sqrt{3} - 16\sqrt{3} - 12}{13} \\
 x &= \frac{4 - 20\sqrt{3}}{13}
 \end{aligned}$$

التمرين 3 :  
1/1

$$\begin{aligned}
 &( \sqrt{5} - 2 )( \sqrt{5} + 2 ) \\
 &= (\sqrt{5})^2 - 2^2 \\
 &= 5 - 4 \\
 &= 1
 \end{aligned}$$

$$E = (\sqrt{3} + 1)(\sqrt{3} - 2) \quad /2$$

$$= 3 - 2\sqrt{3} + \sqrt{3} - 2$$

$$E = 1 - \sqrt{3}$$
  

$$E = (\sqrt{2} - 1)(\sqrt{3} - 2) + (\sqrt{2} - 1)(1 + 2\sqrt{3}) \quad /3$$

$$= (\sqrt{2} - 1)(\sqrt{3} - 2 + 1 + 2\sqrt{3})$$

$$= (\sqrt{2} - 1)(3\sqrt{3} - 4)$$
  

التمرين 4

لما  $C \in [AN]$  و  $B \in [AM]$  و  $(MN) \parallel (BC)$   
فأذا حسب نظرية طاليس

$$\frac{AB}{AM} = \frac{AC}{AN} = \frac{BC}{MN}$$

$$\Rightarrow MN = \frac{AM \cdot BC}{AB}$$

$$= \frac{6 \times 6}{4}$$

$$= \frac{36}{4}$$

$$= \frac{18}{2}$$

$$MN = 9 \text{ cm}$$

$$AN = \frac{AM \cdot AC}{AB} = \frac{6 \times 5}{4} = \frac{30}{4} =$$

$$AN = 7,5 \text{ cm}$$

$$CN = AN - AC = 7,5 - 5 = 2,5$$

لنا  $[AC] \perp P$   
 $[AM] \perp B$   
 $(AC) \parallel (BP)$   
 فإذا حسبنا نرى طالب

$$\frac{AB}{AM} = \frac{AP}{AC} = \frac{BP}{MC}$$

$$\Rightarrow AP = \frac{AC \cdot AB}{AM}$$

$$= \frac{5 \times 4}{6}$$

$$= \frac{20}{6} = \frac{10}{3}$$

$AP = 3,3 \text{ cm}$

