

2018 - 2017 :	
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2017 05 :	
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التمرين الأول : 12 نقاط

الجزء الأول : 04 نقاط

$(C_g) . g(x) = x^2 - x : \mathbb{R}$ g

$\|\vec{i}\| = 2cm$ $(O; \vec{i}; \vec{j})$

$g(x) = \left(x - \frac{1}{2}\right)^2 - \frac{1}{4} : \forall x$ (1)

g (2)

$\left[\frac{1}{2}; +\infty\right[\left] -\infty; \frac{1}{2}\right]$ g (3)

$x \mapsto x^2$ (C_g) (4)

h , $h(x) = g(|x|)$ (5)

الجزء الثاني : 04 نقاط

$P(x) = 2x^3 + 3x^2 - 5 : \mathbb{R}$ $P(x)$

$P(x)$ $x_0 = 1$ (1)

$P(x) = (x-1)Q(x) : Q(x)$ (2)

$P\left(\frac{2018}{1439}\right)$ $P(x) \geq 0$ $P(x) = 0 : \mathbb{R}$ (3)

الجزء الثالث : 04 نقاط

$f(x) = \frac{x^3 - x + 4}{x+1} : D_f = [-2; -1[\cup]-1; 3]$ f

$f'(x) = \frac{(x-1)(2x^2 + 5x + 5)}{(x+1)^2} : D_f$ x -1

f -

$\lim_{h \rightarrow 0} \frac{f(1+h) - f(1)}{h} :$ -

$x_0 = 0$ (T) -

$[f(x) - g(x)] :$ -2

g (C_g) (C_f) -

$$C(4;2), B(3;-1), A(1;3) \quad (o; \vec{i}; \vec{j})$$

$$G = \{(A; m^2 - 4); (B; 2 - m^2); (C; m^2 - 2)\}$$

$$G \quad m \quad (1)$$

$$m = 1 \quad (2)$$

$$\vec{AC} \quad \vec{AB} \quad \vec{AG}$$

$$G \quad -$$

$$\vec{AH} = \frac{-1}{2} \vec{AB} : \quad H \quad (3)$$

$$B \quad A \quad H \quad -$$

$$H \quad G \quad C \quad B, A \quad -$$

$$(GC) \quad (AB) \quad (4)$$

$$: \quad (\delta_2) \quad (\delta_1) \quad M \quad (5)$$

$$(\delta_1): \|3\vec{MA} - \vec{MB} + \vec{MC}\| = \|\vec{MB} - \vec{MC}\|$$

$$(\delta_2): \|3\vec{MA} - \vec{MB}\| = \|\vec{MB} + \vec{MC}\|$$

$$(\delta_1) \quad A \quad -$$

$$(\delta_2) \quad (\delta_1) \quad -$$

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