

2011 -
: 3 :

	مجزأة		
<b>04</b>	<b>01</b>	$x < 6 \quad n = x + 6 + 3 \times 6^2 + 2 \times 6^3 + 2 \times 6^4 = x + 3138$ $x < 6 \quad x + 3138 \equiv 0[4] \quad 4 \quad n \quad (1)$	
	<b>01.5</b>	$\cdot x = 2 \quad x < 6 \quad x \equiv 2[4]$ $5 \quad n \cdot 5 \quad n \quad (2)$	
	<b>01.5</b>	$x < 6 \quad x + 3138 \equiv 0[5]$ $\cdot x = 2 \quad x < 6 \quad x \equiv 2[5]$	
<b>04</b>		$\cdot u_{n+1} = \frac{1}{2}u_n + \frac{9}{4} \quad u_0 = 2 : \quad (u_n)$ $\cdot v_n = 2u_n - 9$	
	<b>1.25</b>	$\cdot v_2 = -\frac{5}{4} \quad v_1 = -\frac{5}{2} \quad v_0 = -5 \quad u_2 = \frac{31}{8} \quad u_1 = \frac{13}{4} \quad (1)$	
	<b>1.25</b>	$\cdot \frac{1}{2} \quad (v_n) \quad v_{n+1} = \frac{1}{2}v_n \quad (2)$	
	<b>0.75</b>	$v_n = -5 \times \left(\frac{1}{2}\right)^n : n \quad v_n \quad (3)$	
	<b>0.75</b>	$u_n = \frac{1}{2}v_n + \frac{9}{2} = -5 \times \left(\frac{1}{2}\right)^{n+1} + \frac{9}{2} : n \quad u_n \quad (4)$	
<b>05</b>		$C(1;-1;4) \quad B(-2;1;0) \quad A(2;0;1)$ $\cdot ABC \quad (1)$	
	<b>01.5</b>	$BC = \sqrt{29} \quad AC = \sqrt{11} \quad AB = 3\sqrt{2}$ $\cdot A \quad ABC \quad BC^2 = AB^2 + AC^2$	
	<b>01</b>	$: \quad (ABC) \quad \vec{n}(2;13;5) \quad (2)$ $\vec{n}(2;13;5) \perp \overline{AC}(-1;-1;3) \quad \vec{n}(2;13;5) \perp \overline{AB}(-4;1;-1)$ $\cdot 2x + 13y + 5z - 9 = 0 : \quad (ABC)$	

07

0.5 (ABC) O H (3)  
 $\vec{n}$  O 1 (ABC)

$$\left. \begin{aligned} (1) \dots x &= 2t \\ (2) \dots y &= 13t \\ (3) \dots z &= 5t \\ (4) \dots 2x + 13y + 5z - 9 &= 0 \end{aligned} \right\}$$

$$t = \frac{9}{198} \quad (4) \quad (3) \quad (2) \quad (1)$$

02

$$H\left(\frac{18}{198}; \frac{117}{198}; \frac{45}{198}\right)$$

0.5

$$f(x) = e^{2x} - 3e^x + x + 2$$

$$\lim_{x \rightarrow -\infty} f(x) = -\infty \quad (1)$$

$$\lim_{x \rightarrow -\infty} (f(x) - (x + 2)) = \lim_{x \rightarrow -\infty} (e^{2x} - 3e^x) = 0 \quad (C)$$

0.5

(C)

$$y = x + 2 \quad (D)$$

$$:(D) \quad (C) \quad (\Rightarrow)$$

$$f(x) - (x + 2) = e^x(e^x - 3) < 0 : x \in ]-\infty; 0]$$

$$. (D) \quad (C)$$

01

$$. f'(x) = 2e^{2x} - 3e^x + 1 = (2e^x - 1)(e^x - 1) \quad (2)$$

$$]-\infty; -\ln 2] \quad f : f \quad ($$

$$. [-\ln 2; 0]$$

01

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0.5

$x$	$-\infty$	$-\ln 2$	$0$
$f'(x)$	$+$	$0$	$-$
$f(x)$	$-\infty$	$\frac{3}{4} - \ln 2$	$0$

01

$$: \ln\left(\frac{2}{3}\right)$$

$$(C) \quad (T) \quad (3)$$

$$y = -\frac{1}{9}x + \frac{4}{9} + \frac{10}{9} \ln \frac{2}{3}$$

02.5

:(C) (D) (T) (

