

2011 -			
H/5	10 - 8 :	:	3 :

( 04 ) :

$$u_n = e^{\frac{1}{3} + 2n} : \quad n \quad (u_n) \quad (1)$$

$$. \quad (u_n) \quad (1)$$

$$. S = u_0 + u_1 + \dots + u_n : \quad (2)$$

$$S = \frac{e^{\frac{1}{3}}}{1 - e^2} (1 - e^{10}) : \quad n \quad (3)$$

$$v_n = \ln(u_n) : \quad N \quad (v_n) \quad (1)$$

$$. \quad (v_n) \quad (1)$$

$$. S' = v_0 + v_1 + v_2 + \dots + v_n : \quad n \quad (2)$$

$$S' = \frac{176}{3} : \quad n$$

( 04 ) :

$$z^2 - 2z + 4 = 0 \quad \underline{C} \quad (1)$$

$$c = 2 + 2i \quad b = 4 \quad a = 2$$

$$E \quad D \quad C \quad B \quad A : \quad (2)$$

$$. e = 1 + \sqrt{3}i \quad d = 1 - \sqrt{3}i$$

$$OCB \quad -$$

$$ODAE \quad -$$

( 05 ) :

$$. (o; \vec{i}; \vec{j}; \vec{k}) \quad (E)$$

$$x^2 + y^2 + z^2 - 4y + 2z + 2 = 0 : \quad M(x; y; z) \quad (S)$$

$$. \sqrt{3} \quad \omega(0; 2; -1) \quad (S) \quad (1)$$

$$. (S) \quad A(-1; 1; 0) \quad (2)$$

$$. A \quad (S) \quad (P) \quad ($$

( 07 ) :

$$f(x) = x + 1 + \ln(x + 1) - \ln(x + 2) : \quad ]-1; +\infty[ \quad f \quad (C_f)$$

2cm

$(O; \vec{i}; \vec{j})$

$$\lim_{x \rightarrow -1^+} f(x) \quad (1)$$

$$\lim_{x \rightarrow +\infty} \ln\left(\frac{x+1}{x+2}\right) = 0 \quad (2)$$

$$y = x + 1 \quad (\Delta) \quad (3)$$

$(C_f)$

$$f \quad (4)$$

$$x = 0 \quad (T) \quad (5)$$

$$-\frac{1}{2} < \alpha < 0 : \quad \alpha \quad (C_f) \quad (6)$$

$$(\Delta) \quad (T) \quad (C_f) \quad (7)$$