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	مجزأة		
04		$. b = 1433 \quad a = 2013 \quad b \quad a$	
	0.5	$. 4 \quad 7 \quad a \quad a = 2013 = 7 \times 287 + 4 \quad (1)$	
	0.5	$. 5 \quad 7 \quad b \quad b = 1433 = 7 \times 204 + 5$	
	0.5	$. 0 \quad 7 \quad (a+2b) \quad a + 2b \equiv 0[7] \quad (2)$	
	0.5	$. a^3 \equiv 1[7] \quad 64 \equiv 1[7] \quad a^3 \equiv 64[7] \quad (3)$	
	0.5	$. b^3 \equiv 6[7] \quad 125 \equiv 6[7] \quad b^3 \equiv 125[7]$	
	0.5	$. a^3 + b^3 \equiv 0[7] \quad 7 \equiv 0[7] \quad a^3 + b^3 \equiv 7[7] :$	
	01	$\begin{cases} n \equiv 6[7] \\ n \leq 16 \end{cases} \quad \begin{cases} n+1 \equiv 0[7] \\ n \leq 16 \end{cases} \quad \begin{cases} n+2013^3 \equiv 0[7] \\ n \leq 16 \end{cases} \quad (4)$ $n \in \{6;13\}$	
06	01.5	$\begin{cases} u_1 = 51 \\ u_3 + u_5 = 300 \end{cases} \quad u_0 \quad (U_n)$	
	01.5	$: u_0 \quad r \quad (1)$	
	01.5	$u_5 = u_1 + 4r = 51 + 4r \quad u_3 = u_1 + 2r = 51 + 2r$	
	0.5	$. r = 33 \quad 102 + 6r = 300 \quad u_3 + u_5 = 300$	
	0.5	$u_0 = 51 - 33 = 18 \quad u_1 = u_0 + r : u_0$	
	01	$u_n = 33n + 18 : n \quad u_n \quad (2)$	
	01.5	$n = 10 \quad 33n + 18 = 348 \quad u_n = 348 \quad (3)$	
	01.5	$. u_{10} \quad 348$	
	02	$. S = u_0 + u_1 + \dots + u_{10} = \frac{11}{2}(18 + 348) = 2013 \quad (4)$	

10

01

$$f(x) = x^2 - 2x - 3$$

01

$$\cdot \lim_{x \rightarrow +\infty} f(x) = \lim_{x \rightarrow +\infty} x^2 = +\infty \quad \cdot \lim_{x \rightarrow -\infty} f(x) = \lim_{x \rightarrow -\infty} x^2 = +\infty \quad (1)$$

01

$$\cdot f'(x) = 2x - 2 \quad (2)$$

$$\cdot [1; +\infty[\quad]-\infty; 1]$$

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x	$-\infty$	1	$+\infty$
$f'(x)$		$-$	$+$
$f(x)$	$+\infty$	-4	$+\infty$

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$$\cdot x_0 = 0 \quad (T) \quad (3)$$

0.5

$$y = -2x - 3$$

01

$$\cdot (C_f) \quad (4)$$

$$y = -3 \quad x = 0$$

$$A(0; -3) \quad (C_f)$$

$$x = 3 \quad x = -1 \quad y = 0$$

02.5

$$\cdot C(3; 0) \quad B(-1; 0) \quad (C_f)$$

$$\cdot (C_f) \quad (\Delta) \quad (5)$$

