

2011 -	
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	مجزأة		
04		: 5    2 <sup>n</sup> (1)	
	02	. 2 <sup>4k+3</sup> ≡ 3[5]    2 <sup>4k+2</sup> ≡ 4[5]    2 <sup>4k+1</sup> ≡ 2[5]    2 <sup>4k</sup> ≡ 1[5]	
	01	. 1432 <sup>2011</sup> ≡ 3[5]    2011 = 4 × 502 + 3    1432 ≡ 2[5] (2)	
	01	. 2 <sup>412</sup> + 2 <sup>8n+2</sup> - 5 ≡ 0[5]    2 <sup>8n+2</sup> ≡ 4[5]    2 <sup>412</sup> ≡ 1[5] (3)	
06		$\begin{cases} u_1 + u_3 = 12 \\ u_3 + u_4 + u_5 = 30 \end{cases} : u_1 \quad (u_n)$	
	01	$u_2 = \frac{u_1 + u_3}{2} = 6$ (1)	
	01	. u <sub>4</sub> = 10    3u <sub>4</sub> = 30	
	0.75	. r = 2    u <sub>4</sub> = u <sub>2</sub> + 2r (2)	
	0.75	u <sub>1</sub> = 4    u <sub>1</sub> = u <sub>2</sub> - r	
	0.75	u <sub>n</sub> = u <sub>1</sub> + (n - 1).r = 2n + 2 : n    u <sub>n</sub> (3)	
	0.75	. n = 15    2n + 2 = 32    u <sub>n</sub> = 32	
	01	S = u <sub>1</sub> + u <sub>2</sub> + ... + u <sub>15</sub> = $\frac{15}{2}(u_1 + u_{15}) = 270$ (4)	
10		$f(x) = \frac{2x-1}{-x+1}$	
	01	$f(x) = -2 + \frac{1}{-x+1} : R - \{1\} \quad x$ (1)	
		: f (2)	
	0.5	. $\lim_{x \rightarrow -\infty} f(x) = -2$	
	0.5	. $\lim_{x \rightarrow +\infty} f(x) = -2$	
	0.5	. $\lim_{x \rightarrow 1^-} f(x) = +\infty$	
	0.5	. $\lim_{x \rightarrow 1^+} f(x) = -\infty$	

0.5

$$f'(x) = \frac{1}{(-x+1)^2} > 0$$

0.1

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$x$	$-\infty$	$1$	$+\infty$
$f'(x)$	+		+
$f(x)$	$-2 \nearrow +\infty$		$-\infty \nearrow -2$

0.5

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

$$(c_f) \quad x = 2 \quad x = 0$$

0.1

.1

0.5

$$y = x - 1 : 0 \quad (\Delta)$$

0.5

$$y = x - 5 : 2 \quad (\Delta')$$

0.5

$$\cdot (0; -1) : \quad (c_f) \quad (4)$$

0.5

$$\cdot \left(\frac{1}{2}; 0\right) : \quad (c_f)$$

$$\cdot (C) \quad (\Delta') \quad (\Delta) \quad (5)$$

02.5

