

2011 -
: / 3:

	مجزأة											
04	01.5	: 5 3^n (1)										
	0.5	$\cdot 3^{4k+3} \equiv 2[5] \quad 3^{4k+2} \equiv 4[5] \quad 3^{4k+1} \equiv 3[5] \quad 3^{4k} \equiv 1[5]$										
	0.5	$\cdot 3^{2010} \equiv 4[5] \quad 2010 = 4 \times 502 + 2$ (2)										
	01.5	$\cdot 3^{2011} \equiv 2[5] \quad 2011 = 4 \times 502 + 3$ $3 \times 3^{2010} + 3^{2011} + n \equiv 0[5] \quad 3 \times 8^{2010} + 23^{2011} + n \equiv 0[5]$ (3) (3)										
		$\cdot n = 5k + 1 \quad / k \in N \quad n \equiv 1[5] \quad 4 + n \equiv 0[5]$										
06		150										
		<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;"></td> <td style="width: 30%;"></td> </tr> <tr> <td></td> <td style="text-align: center;">30</td> <td style="text-align: center;">55</td> </tr> <tr> <td></td> <td style="text-align: center;">20</td> <td style="text-align: center;">45</td> </tr> </table>					30	55		20	45	
	30	55										
	20	45										
	01.5	$\frac{50}{150} = \frac{1}{3}$:	(1)									
	01.5	$\frac{100}{150} = \frac{2}{3}$:	(2)									
	01.5	$\frac{85}{150} = \frac{17}{30}$:	(3)									
	01.5	$\frac{65}{150} = \frac{13}{30}$:	(4)									
10	0.5	$\cdot \left[-3; \frac{3}{2}\right]$	f (C_f)									
	0.5	$\cdot f(-2) = 0$ ((1)									
	0.5	$\cdot f'(-2) = 0$										
	0.5	$\cdot f'(0) = 0$										

$$f(0) = -4$$

: f (

02

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

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$$S = \{-2; 1\} : f(x) = 0 \quad (\Rightarrow$$

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$$S = [-3; 1] : f(x) \leq 0$$

$$y = -3x - 5 : M(-1; -2) \quad (\sphericalangle$$

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$$f(x) = x^3 + 3x^2 - 4 \quad (2$$

: x (

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$$(x^2 + 4x + 4)(x - 1) = x^3 + 3x^2 - 4$$

$$(x^2 + 4x + 4)(x - 1) = 0 \quad f(x) = 0 ($$

$$x = -2 \quad x = 1$$

01

$$. M(-1; -2) \quad (C_f) \quad (\Rightarrow$$

