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02 :	:	+	:
			3:
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			:

	مجزأة										
05		$3^n \equiv 1 [16]$ (1)									
	01.5	$3^{4k+3} \equiv 11 [16] \quad 3^{4k+2} \equiv 9 [16] \quad 3^{4k+1} \equiv 3 [16] \quad 3^{4k} \equiv 1 [16]$									
	01.5	$5^{4k+3} \equiv 13 [16] \quad 5^{4k+2} \equiv 9 [16] \quad 5^{4k+1} \equiv 5 [16] \quad 5^{4k} \equiv 1 [16]$									
	01	$A = 16^{502} + 3^{502 \times 4 + 1} + 16^{1005} + 5^{502 \times 4 + 3} \equiv (0 + 3 + 0 + 13) [16] \equiv 0 [16]$ (2)									
06	01	$3^x + 5^y \equiv 0 [16]$ (3)									
	01	$(x; y) \in \{(4k+1; 4k+3); (4k+3; 4k+1)\}$									
	01	$5 \quad 3 \quad 6$									
	01.5	$X(\Omega) = \{10; 15; 20\} : X$ (2)									
	01.5	<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;">x_i</td> <td style="padding: 5px;">10</td> <td style="padding: 5px;">15</td> <td style="padding: 5px;">20</td> </tr> <tr> <td style="padding: 5px;">$P(X = x_i)$</td> <td style="padding: 5px;">$\frac{3}{15}$</td> <td style="padding: 5px;">$\frac{9}{15}$</td> <td style="padding: 5px;">$\frac{3}{15}$</td> </tr> </table>	x_i	10	15	20	$P(X = x_i)$	$\frac{3}{15}$	$\frac{9}{15}$	$\frac{3}{15}$	
x_i	10	15	20								
$P(X = x_i)$	$\frac{3}{15}$	$\frac{9}{15}$	$\frac{3}{15}$								
	01	$E(X) = \frac{30 + 135 + 60}{15} = \frac{225}{15} = 15$									
	01	$V(X) = \frac{300 + 2025 + 1200}{15} - 225 = \frac{3525}{15} - 225 = 10$									

09

01

: (1)

. $f(2) = -2$ $f(-2) = 2$

01

$y = -2$: 2

(C_f) (2)

01

: -2

(C_f)

$y = 2x + 6$

02

:[-4;5]

f

(3)

x	-4	-1	2	5		
f'(x)		+	0	-	0	+
f(x)	-6		3		-2	7

01

. $S = \{-3; 1; 3\}$: [-4;5] $f(x) = -1$ ((4)

01

. $S = \{-2; 0; 4\}$: [-4;5] $f(x) = 2$ (

01

. $S = [-4; 4; 5[$: [-4;5] $f(x) < 4$ (

01

: [-4;5] $f(x) \geq 2$ (

. $S = [-2; 0] \cup [4; 5]$