

慶應義塾大学 経済学部 (2/13) 数学

[1]

(1)	7
(2)(3)(4)	110
(5)(6)	19
(7)(8)(9)	2, 2, 3
(10)	3
(11)(12)	21
(13)(14)	35

[2]

(15)(16)(17)(18)(19)	$\frac{25}{216}$
(20)(21)	$\frac{3}{8}$
(22)(23)(24)(25)	$\frac{7^5}{6^6}$
(26)(27)	$\frac{7^5}{6^7}$
(28)(29)(30)(31)	$\frac{7^6}{6^7} - \frac{7^2}{6^3}$

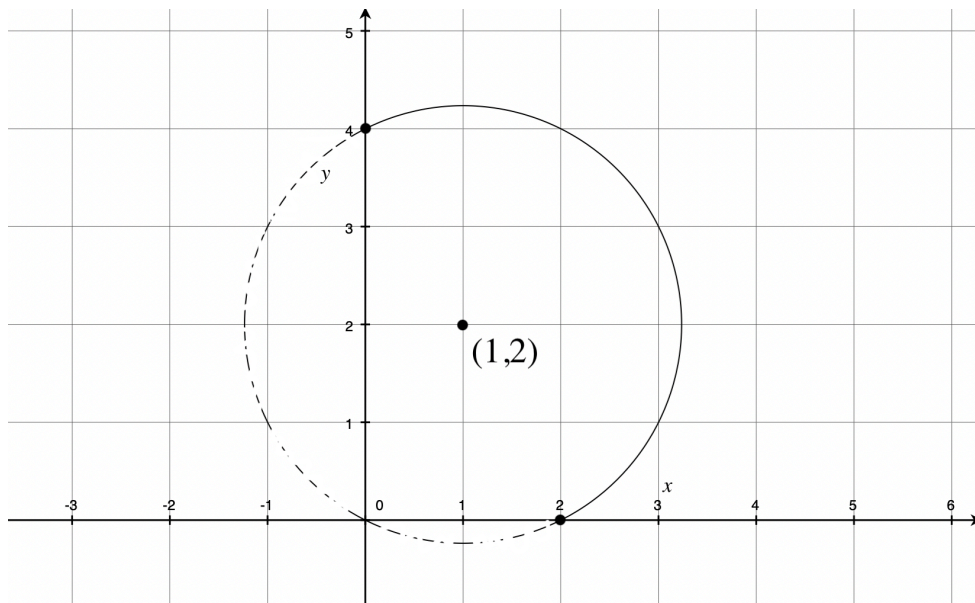
[3]

(32)(33)(34)(35)	2, 2, 4, 3
(36)(37)(38)(39)	2, 0, 1, 1
(40)(41)(42)(43)	2, 1, 1, 1
(44)(45)(46)(47)	2, 2, 1, 1
(48)(49)(50)(51)	2, 2, 1, 2
(52)	2
(53)(54)(55)(56)	$\frac{70}{33}$
(57)(58)	2, 1

[4]

(1) $P\left(\frac{p}{1-r}, \frac{q}{1-r}, 0\right) \quad Q\left(\frac{p}{1+r}, \frac{q}{1+r}, 0\right)$

(2) 点 $(1, 2)$ を中心とする半径 $\sqrt{5}$ の円のうち、 $x \geq 0, y \geq 0$ を満たす部分。



(3) $\frac{4\sqrt{5}}{21}$

[5]

(1) $\alpha = \frac{2}{\sqrt{3}}$ (2) $t = \frac{8}{3} - \log_2(4 - s)$ (3) 最大値 $\frac{3\sqrt{3}+1}{2}$, 最小値 $-\sqrt{10}$

[6]

(1) $f(x) = \frac{4}{a}(x - a)^2(x - \frac{a}{4})$

(2) $0 < a \leq \frac{4}{5}, 2 \leq a$ のとき最大値 $\frac{4}{a}(1 - a)^2(1 - \frac{a}{4})$

$\frac{4}{5} < a < 2$ のとき最大値 $\frac{a^2}{4}$

(3) $\frac{27}{2}$