

10.1. , 9,
 : 800. 2? 9.1.

10.2. ,
 $2x^2 + 3xy + y^2 + x = 1$.
 : $y = -x - 1$ $y = -2x + 1$.

$$D = (3x)^2 - 4(2x^2 + x - 1) = x^2 - 4x + 4 = (x - 2)^2, \quad y_1 = (-3x + x - 2)/2 = -x - 1,$$

$$y_2 = (-3x - x + 2)/2 = -2x + 1.$$

10.3.) , $x^3 + y = y^3 + x$, = .
) ? , ,

:) .) .) 9.2 ($x^2 + xy + y^2 = 1$,
 ,) $y = xt$ ($x, y, t \in \mathbf{Q}$). y

$$x^2 + xy + y^2 = 1, \quad t^2 + t + 1 = \frac{1}{x^2}. \quad u = \frac{1}{x}, u \in \mathbf{Q},$$

$$t^2 + t + 1 - u^2 = 0.$$

$$: 1 - 4(1 - u^2) = v^2 \quad (v \in \mathbf{Q}) \Leftrightarrow 4u^2 - v^2 = 3 \Leftrightarrow (2u - v)(2u + v) = 3.$$

$$\begin{aligned} & \text{, } v \text{)} \text{, } \text{ : } 2u + v = 9 \\ & \text{, } 2u - v = \frac{1}{3}. \quad u = \frac{7}{3}, v = \frac{13}{3}. \quad x = \frac{3}{7} \quad t = \left(-1 + \frac{13}{3}\right)/2 = \frac{5}{3}. \\ & \text{, } x = \frac{3}{7} \quad y = \frac{5}{7} \text{ ()} \end{aligned}$$

10.4. . - , . , \mathbf{Q} .
 45° , , a \mathbf{Q} , N - ;
 $N($, , \mathbf{Q} , B). : , , \mathbf{Q} , B):

$$S_{CPQ} = S_{AMP} + S_{BNQ}.$$

9.4.

10.5. 5 , ,
 . $ABCA_1B_1C_1D_1$ 4 A, C, B_1, D_1 -
 $a\sqrt{2}$, $a = 5 - 5\sqrt{2} > 7$,
 $\frac{7}{5\sqrt{2}}$, ...