

[5] $G: y = 2x^2 - 4(a+1)x + 10a + 1 \dots \textcircled{1}$

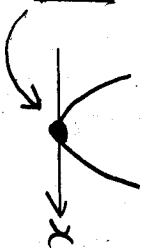
$$= 2 \{ x^2 - 2(a+1)x \} + 10a + 1$$

$$= 2 \{ x - (a+1) \}^2 - 2(a+1)^2 + 10a + 1$$

$$= 2 \{ x - (a+1) \}^2 - 2a^2 + 6a - 1$$

頂点 $(a+1, -2a^2 + 6a - 1)$ (3~4)

(1) x 軸と接する $\Leftrightarrow (\text{頂点 } y) = 0$



$$-2a^2 + 6a - 1 = 0$$

$$2a^2 - 6a + 1 = 0 \quad \therefore a = \frac{3 \pm \sqrt{7}}{2}$$

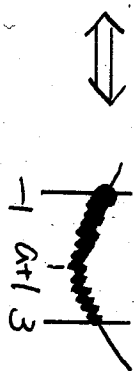
(4~7)

別解 $D=0$ となる

$$D/4 = \{ 2(a+1) \}^2 - 2(10a+1)$$

$$= 4(a+1)^2 - 20a - 2 = 0 \quad \text{<1>X<F略>}$$

[2] [1] $-1 \leq x \leq 3$ にあつて $m = -2a^2 + 6a - 1$



$$-1 \leq a+1 \leq 3 \quad a \in \mathbb{R}$$

$$\text{7~8)} \quad -2 \leq a \leq 2 \quad a \in \mathbb{R}$$

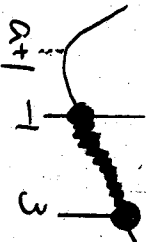
(4~7)

[2] $a+1 < -1$ $a \in \mathbb{R}$

(7~8) $a < -2$

[3] $3 < a+1$ $a \in \mathbb{R}$

(7~8) $2 < a$



$$x = -1 \text{ 2. Min}$$

$$x = 3 \text{ 2. Min}$$

$$m = \frac{14a+7}{9} \quad (3 \sim 7)$$

$$m = \frac{-2a+7}{9} \quad (7 \sim 8)$$

$$m = \frac{7}{9} \text{ と 13 の 18.}$$

[1] $-2a^2 + 6a - 1 = \frac{7}{9} \rightarrow a = \frac{1}{3} \quad (a = \frac{8}{3} \text{ は不適})$

[2] $14a + 7 = \frac{7}{9} \rightarrow a = -\frac{14}{9} \quad (\text{不適})$

[3] $-2a + 7 = \frac{7}{9} \rightarrow a = \frac{28}{9} \quad (\text{適})$

[1] ~ [3] より $a = \frac{1}{3}, \frac{28}{9}$
 (ツ~三)