

4.11
1 - (10)

$$4x^2 - (8^{m-1})x - 3(64^m - 8^m) = 0$$

$$0 < \Delta = (8^{m-1})^2 + 48(64^m - 8^m) = (8^{m-1})^2 + 48 \cdot 8^m (8^{m-1})$$

$$0 < (8^{m-1}) [8^{m-1} + 48 \cdot 8^m]$$

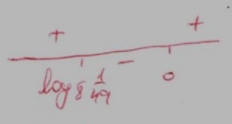
$$\downarrow$$

$$m=0$$

$$\downarrow$$

$$49 \cdot 8^m = 1$$

$$8^m = \frac{1}{49}$$



$$m = \log_8 \frac{1}{49} = -\log_8 49$$

$$\boxed{m < \log_8 \frac{1}{49} \quad \vee \quad m > 0}$$

(2) 2.7.2) 10 f.10.5 f.1.1.2

$$0 > f(1) = 4 - 8^m + 1 - 3 \cdot 64^m + 3 \cdot 8^m$$



$$3 \cdot 64^m - 2 \cdot 8^m - 5 > 0$$

$$3t^2 - 2t - 5 > 0$$

$$8^m = t$$

$$8^m > \frac{5}{3} \rightarrow \boxed{m > \log_8 \frac{5}{3}}$$

$$8^m < -1 \rightarrow \emptyset$$



$$0 < f(t) = -3(64^m - 8^m)$$

$$0 > 64^m - 8^m = 8^m (8^{m-1})$$

$$\downarrow \quad \downarrow$$

$$0 > 8^m \quad \vee \quad m=0$$

