

(I)

(1)

$$AC = \sqrt{3} + 1, \quad CB = \sqrt{6}, \quad BD = \sqrt{7}. \cdots \text{ [答]}$$

(2)

$$S = \frac{\sqrt{39}}{2}. \cdots \text{ [答]}$$

〔II〕

(1)

$$m = 0, 1, 2, \cdots \quad \text{〔答〕}$$

(2)

$$\frac{2}{3} < t < 1, \quad 2 < t, \cdots \quad \text{〔答〕}$$

(3)

$$(t, n, m) = (2, 0, 0), (2, 3, 6), (2, 4, 4), (2, 6, 3), \cdots \quad \text{〔答〕}$$

〔III〕

(1)

$$\frac{5}{32}, \dots \text{〔答〕}$$

(2)

$$\frac{729}{64}, \dots \text{〔答〕}$$

(3)

$$p = \frac{3}{7}, \dots \text{〔答〕}$$