

6. (1) 是离散型的.

$$(2) X \sim B(10, 0.5), P(X \geq 6) = 1 - P(X \leq 5) \\ = 1 - 0.623 = 0.377.$$

$$(3) P(X \leq 4) = 0.377.$$

34. $X \sim P_0(0.5).$

$$(1) P(X=0) = \frac{e^{-0.5} 0.5^0}{0!} = e^{-0.5} \\ = 0.6065.$$

$$(2) P(X \geq 1) = 1 - P(X=0) = 1 - e^{-0.5} = 0.3935.$$

$$P(X=x) = \frac{e^{-\lambda} \lambda^x}{x!} \\ P(X=k) = \sum_{x=0}^k \frac{\lambda^x}{x!} e^{-\lambda}.$$

35. $X \sim P_0(3).$

$$(1) P(X=0) = \frac{e^{-3} 3^0}{0!} = 0.0498$$

$$(2) P(X=2) = \frac{e^{-3} 3^2}{2!} = 0.224.$$

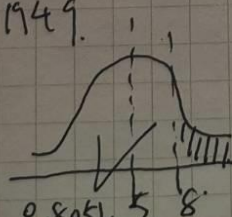
$$0.4232 - 0.199 = 0.2241.$$

39. $X \sim N(5, 3.5^2).$

$$P(X > 8) = P(Z > \frac{8-5}{3.5}) =$$

$$= P(Z > 0.86)$$

$$= 1 - 0.8061 = 0.1939.$$



8. $X \sim N(13.2, 5.3^2).$

$$(1) P(X > 15) = P\left(\frac{X-13.2}{5.3} > \frac{15-13.2}{5.3}\right).$$

$$= P(Z > 0.34).$$

$$= 1 - P(Z \leq 0.34)$$

$$= 1 - 0.6331$$

$$= 0.3669.$$

(2). $n=66.$

$$X \sim N(13.2, 5.3^2).$$

$$\therefore \bar{X} \sim N\left(13.2, \frac{5.3^2}{66}\right).$$

$$\frac{\bar{X} - 13.2}{\frac{5.3}{\sqrt{66}}} \sim N(0, 1)$$