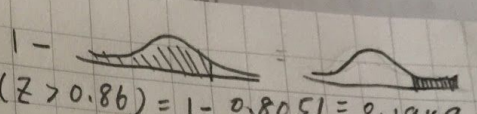
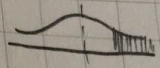


39) $X \sim N(5, 3.5^2)$

$$P(X > 8) = P\left(Z > \frac{8-5}{3.5}\right) = P(Z > 0.86) = 1 - 0.8051 = 0.1949$$


CH 5 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) $\bar{X} \sim N\left(\mu, \frac{\sigma^2}{n}\right) = \bar{X} \sim N\left(13.2, \frac{5.3^2}{16}\right)$

$$P(\bar{X} > 15) = P\left(\frac{\bar{X}-13.2}{\frac{5.3}{\sqrt{16}}} > \frac{15-13.2}{\frac{5.3}{\sqrt{16}}}\right) = P(Z > 1.36) = 1 - P(Z \leq 1.36) \\ = 1 - 0.9131 \\ = 0.0869$$