

$$\binom{10}{3} \left(\frac{1}{6}\right)^3 \left(\frac{5}{6}\right)^7 = \frac{10 \times 9 \times 8}{3 \times 2 \times 1} \left(\frac{1}{6}\right)^3 \left(\frac{5}{6}\right)^7 = 0.1550.$$