Part 6.4 Answers

1a. μ = \$1.80, σ = \$26.40 (3sf)
1b. μ = \$8.50, σ = \$79.90 (3sf)
1c. The second raffle
1d. \$4 and \$11
1e. \$50.20

2a. μ =\$2644, σ = \$592 (3sf)
2b. 0.274 (3sf)
2c. We were assuming that the amount spent by one person was independent from the others (which may not be a good assumption in this case as they are all from one family, and how much they spend is likely to be affected by how much others in the family spend).

3. Project 1: σ = \$16,500, μ = \$46,700
Project 2: σ = \$41,100, μ = \$207,000
Combined: σ = \$44,288, μ = \$253,700
P(Total > \$300,000) = 0.148 (3sf)
We have assumed that the cost of one project doesn't affect the cost of the other project, and that a normal distribution is appropriate to model the combined costs.