

This quiz covers material from section 8.6.

1. (*2 points*) The number of hours per week a randomly chosen American watches television is normally distributed with mean 20 hours and standard deviation 8 hours. What is the probability that a randomly chosen American watches between 14 and 28 hours of television per week (2-4 hours per day)?

2. (*2 points*) A recent poll shows that sixty percent of Americans own a portable MP3 player. A random sampling of 30 people is taken. Using the normal distribution to estimate the binomial distribution, calculate the probability that more than twenty of them own a portable MP3 player.

3. (*2 points*) Acme Stylings produces hairdryers in its Maryland factory. On average, approximately 3% of the hairdryers produced have flaws that do not allow them to be shelved. A batch of 2000 units comes off the production line; using the normal distribution to estimate the binomial distribution, calculate the probability that at most 75 of the units are defective.