Section 11.3

1) What percent of the area under the curve lies to the right of the mean?

2) Suppose a score is chosen at random. What is the probability that it lies to the right of the mean?

3) What percent of the area under the curve lies between $\mu - \sigma$ and $\mu + \sigma$?

4) Suppose a score is chosen at random. What is the probability that it lies within one standard deviation of the mean?

5) This example will help you do exercises 9-14, 19-22 on p.533
Z denotes the standard normal random variable. Find:
   a) $P(0 \leq Z \leq 1.95)$
   b) $P(-2 \leq Z \leq 0)$
   c) $P(Z \leq .79)$
   d) $P(Z \geq 1.3)$
   e) $P(1.11 \leq Z \leq 2.49)$
   f) $P(-.03 \leq Z \leq 1.98)$
   g) $P(Z \geq 5.9)$

6) This example will help you do exercises 23-26 on p.534
Let X be a normal random variable with $\mu = 0.51$ and $\sigma = 0.23$. Find:
   a) $P(X \leq .65)$
   b) $P(-.65 \leq X \leq -.15)$

7) This example will help you do exercises 27-32, 34 on p.493
Suppose the annual rainfall in Statville is known to be normally distributed with a mean of 35.5 inches and a standard deviation of 2.5 inches. In a randomly selected year, what is the probability that the rainfall exceeds 41 inches?

8) Without using the table, find:
   $P(Z < -3) + P(-3 \leq Z \leq -1) + P(-1 < Z \leq 2) + P(Z > 2)$

Section 11.4

1) A fair coin is tossed 100 times. What is the probability that we get:
   a) between 40 and 60 heads, inclusive?
   b) exactly 50 heads?

2) The admissions office at Slippery Rock University knows from past experience that 60% of all high school applicants will enroll as freshmen. If 1200 high school students apply for admissions for next year, what is the probability that no more than 750 will enroll?