Name:_____   Math 130 Day 11 In Class Worksheet
Date: Normal Distributions

1. Find the following probabilities. Make sure to use correct notation, formulas, and draw pictures.

a) $P(Z < 1.35)$

b) $P(Z > -0.97)$

c) $P(-2.19 < Z < 0.41)$

d) $P(Z = 1.86)$

2. Lifespans of monarch butterflies are normally distributed with a mean of 308 days and a standard deviation of 39 days.

a) What is the random variable in this problem?

b) What are all possible values of X?

c) What distribution does X have?

d) What is the probability that a randomly selected monarch butterfly will have a lifespan that is more than 300 days?

e) What is the probability that a randomly selected monarch butterfly will have a lifespan that is at most 340 days?

f) What is the probability that a randomly selected monarch butterfly will have a lifespan that is between 270 and 365 days?