Name:_____ Date:

Math 130 Day 11 Lecture Worksheet Normal Distributions

For examples 1-7 below, z stands for the standard normal random variable. Find each of the probabilities below and don't forget to draw pictures and use formulas where appropriate...

Ex 1:Find P(z < 1.39)Ex 2:Find P(z < -0.87)Ex 3:Find P(z < -2.03)Ex 4:Find P(z > -1.77)Ex 5:Find P(z > 0.18)Ex 6:Find P(0.28 < z < 2.17)Ex 7:Find P(-2.33 < z < -1.04)

<u>Ex 8</u>: Suppose X has a normal distribution with a mean of 30 and a standard deviation of 7. Find...

- a) P(X < 35)
- b) P(X > 18)c) P(28 < X < 37)

<u>Ex 9</u>: Pregnancy lengths have a normal distribution with a mean of 270 days and a standard deviation of 15 days. Find...

- a) the probability that a randomly selected pregnancy lasts longer than 261 days
- b) the probability that a randomly selected pregnancy lasts between 267 and 290 days
- c) the probability that a randomly selected pregnancy lasts less than 242 days