“Homework6” Justin Minsk

# 6.1

# 1

pnorm(2.2)

# 0.9860966

# 2

pnorm(2)-pnorm(-1)

# 0.8185946

# 3

1 - pnorm(2.5)

# 0.006209665

# 4

diff( c(qnorm(0.05), qnorm(0.95) ) )/2

pnorm(1.644854) - pnorm(-1.644854)

# b = 1.644854

# 6.2

# Normal(350,75), 450 pounds

1 - pnorm(450, mean = 350, sd = 75)

# 0.09121122 or 9.12% that a male black bear weighs more than 450 pounds.

# 6.3

# mean 24.9 cm, sd 1.05 cm, < 26 cm, 95th percentile

pnorm(26, mean = 24.9, sd = 1.05)

# 0.8525929 or 85.3% probability that a Japanese women is under 26 cm tall.

qnorm(0.95,24.9,1.05)

# 26.6271 cm and higher is the 95th percentile.

# 6.4

# mean = 3.20 in, standard deviation of 0.35 in, 3.5 and 4 inches

pnorm(4, mean = 3.20, sd = 0.35) - pnorm(3.5, mean = 3.20, sd = 0.35)

# They make gloves for 0.1845475 or 18.45% of the population.

# 6.5

# Normal(12, 0.5) in, height of 10.7 inches or less

pnorm(10.7, mean = 12, sd = 0.5)

# There is a 0.004661188 or 0.47% chance of a box being filled to 10.7 in. or below.