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Workshop 5.18

**a)**

scores = pnorm(23,19.2,5.1)

scores = 0.7675399

1-scores = 0.2324601=23.25%

**b)**

5.1/sqrt(25) = 1.02

Standard Deviation = 1.02

Mean = 5.1

**c)**

c = pnorm(23,19.2,1.02)

100\*(1-c)

Ans = 0.00975%

**d)**

c is far more accurate because we have a larger sample size which gave us our xbar value which we plugged into the pnorm function in c.

Script Below:

# a)

# number students, mean, sd

students = pnorm(23,19.2,5.2)

students

#result

1-students

# b)

#mean/sqrt(sample size)

5.1/5

# c)

#number students, mean, sigma xbar from b)

c = pnorm(23,19.2,1.02)

100\*(1-c)