JOHNS HOPKINS
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SCHOOL of PUBLIC HEALTH

# Lecture 1c: Practice Problems

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# Practice Problems

1. The following data is the annual income (in $1,000s of U.S. dollars) taken from nine randomly chosen students in the Hopkins internet-based MPH program:

37 102 34 12 111 56 72 17 33

# Practice Problems

a) Calculate the sample mean income

b) Calculate the sample median income

c) Calculate the sample standard deviation of these incomes

d) What population could this sample represent?

e) Which would change by a larger amount—the mean or median—if the 34 were replaced by 17, and the 12 replaced by a 31?

# Practice Problems

2. The following data shows birthweights (oz) from seven consecutive deliveries at the Johns Hopkins Hospital in April 2007

121 138 32 100 58 64 146

# Practice Problems

a) Calculate the sample mean birthweight

b) Calculate the sample median birthweight

c) Calculate the sample standard deviation of these birthweights

d) What population could this sample represent?

e) Suppose this is a representative sample of births in a given year at Johns Hopkins. Suppose, instead of a sample of seven values, we have a sample of 100 birthweights. How should the mean, median, and standard deviation of this sample compare to the same statistics for the sample of seven birthweights?