Quiz 2 (Group) for Statistics 113
Statistics and Society - Spring 1999
Material Covered: Chapters 5,6 of notes
For: 12th February

Name 1 (please print): ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ .
last   first

Name 2 (please print): ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ .
last   first

Name 3 (please print): ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ .
last   first

Name 4 (please print): ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ .
last   first

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1. Assume the heights of snowmen (you know, with carrot noses and sticks for arms) found in the Westville area follow a normal curve. The average height is found to be 10.3 meters and the SD is 1.2 meters.

(a) [1] The height of a snowman two SDs above the average height is (circle one) **10.3 / 11.3 / 12.3 / 12.7** meters tall.

(b) [1] A snowman which has a height of 4 meters less than the average

is how many SD units below the average? ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ .

(c) [1] The percentage of snowmen within 1.5 SDs of the average is ⎯⎯⎯⎯⎯⎯⎯ .

(d) [1] The number of standard units (or the z–score) for a

snowman that has a height of 9 meters is ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ .

(e) [1] The percentile for a snowman that has a height of 9 meters is ⎯⎯⎯⎯⎯⎯ .

(f) [1] **True / False** The tallest snowman in the Westville area is found to be 11.2 meters. This clearly indicates that the heights of the snowmen do *not* follow a normal curve.

(a) [1] The height of a snowman two SDs above the average height is (circle one) **12.7** meters tall. **12.7** $(10.3 + 2(1.2) = 12.7)$

(b) [1] A snowman which has a height of 4 meters less than the average is how many SD units below the average? $\frac{4}{1.2} \approx$ **3.33**

(c) [1] The percentage of snowmen within 1.5 SDs of the average is **86%**

(d) [1] The number of standard units (or the z–score) for a snowman that has a height of 9 meters is $\frac{9-10.3}{1.2} \approx$ **−1.08**

(e) [1] The percentile for a snowman that has a height of 9 meters is **since z–score is -1.08**, $\frac{100-73}{2} \approx$ **13.5**

(f) [1] **True** The tallest snowman in the Westville area is found to be 11.2 meters. This clearly indicates that the heights of the snowmen do *not* follow a normal curve. **since 11.2 pounds would be within one SD of the average, if the weighs did follow a normal curve**