

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

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? $\frac{4}{1.2} \approx \mathbf{3.33}$
- (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 $\frac{9-10.3}{1.2} \approx \mathbf{-1.08}$
- (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**