

# Math 153 - Quiz 3

September 7, 2017

Name key

Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary. YOU MUST WORK INDIVIDUALLY.

1. (5 points) The frequency distribution shows the body mass indices of 40 adults.

| BMI       | Frequency |
|-----------|-----------|
| 17.2-20.2 | 4         |
| 20.3-23.3 | 9         |
| 23.4-26.4 | 7         |
| 26.5-29.5 | 9         |
| 29.6-32.6 | 5         |
| 32.7-35.7 | 4         |
| 35.8-38.8 | 2         |

← 4<sup>TH</sup>  
← 6<sup>TH</sup>

(a) What is the class width?

$$20.3 - 17.2 = \boxed{3.1}$$

(b) What are the class midpoints?

$$\frac{17.2 + 20.2}{2} = 18.7, 21.8, 24.9, 28.0, 31.1, 34.2, 37.3$$

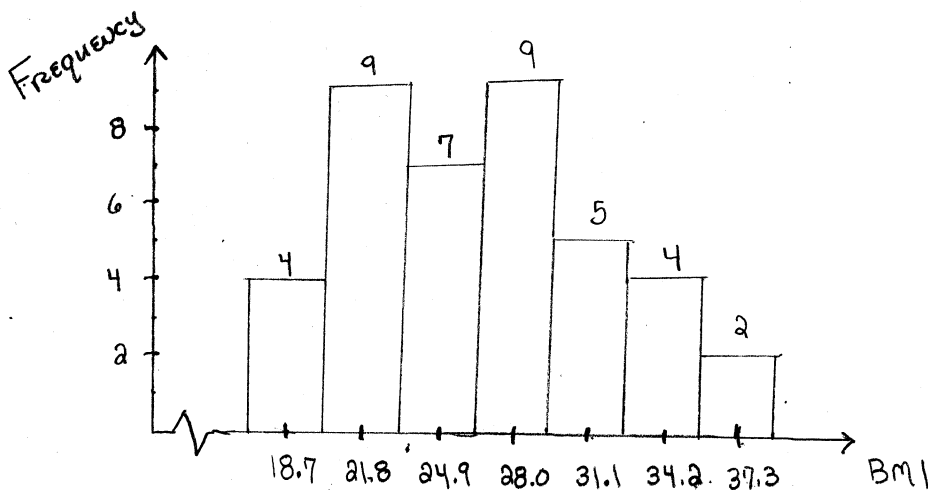
(c) What are the boundaries on the 4th class?

$$26.45 \text{ AND } 29.55$$

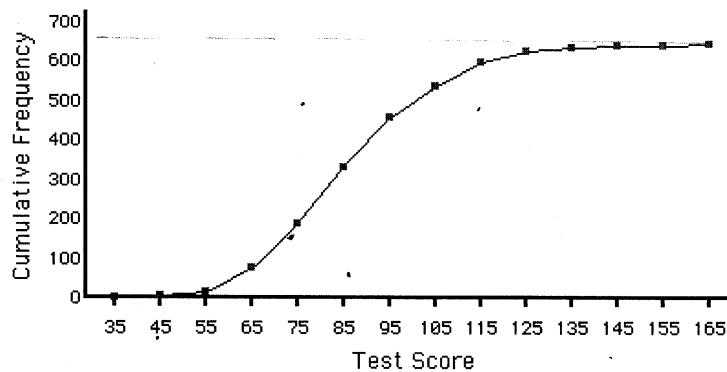
(d) What is the relative frequency of the 6th class listed above?

$$\frac{4}{40} = 10\%$$

(e) Using class midpoints along the horizontal axis, construct the corresponding frequency histogram.



2. (3 points) The following graph summarizes the scores on a widely administered test.



(a) What is the name of this type of graph?

Ogive

(b) About how many test scores are in the sample?

About 650

(c) Which interval along the horizontal axis contains the most test scores? Explain how you know.

75-85 --- Steepest slope  
INDICATES GREATEST  
CHANGE

3. (1 point) What type of graph is typically used to show portions of a whole?

PIE CHART (CIRCLE GRAPH)

4. (1 point) What is one big difference between a histogram and a bar graph?

THE HORIZONTAL AXIS OF A BAR GRAPH IS SEPARATED BY CATEGORIES RATHER THAN BEING A NUMBER LINE FOR SEPARATING NUMERICAL CLASSES.