MATH 140 WORKSHEET ½ NAME:_____

Let $D = \{x_1, x_2, x_3, x_4, x_5, \ldots, x_n\}$ where n is a natural number ($n \in \mathbb{N}$).

Consider the formulae:

$$\overline{X} = \frac{\sum_{k=1}^{n}(X_k)}{n} \qquad g_D = \sqrt[n]{\prod_{k=1}^{n}(X_k)} \qquad h_D = \frac{n}{\sum_{k=1}^{n}\left(\frac{1}{X_k}\right)}$$

Find each of the following:

1. $\overline{X}$, g_D, and h_D where $D = \{1, 2, 4\}$

2. $\overline{X}$, g_D, and h_D where $D = \{2, 2, 2, 2\}$

3. $\overline{X}$, g_D, and h_D where $D = \{1, 9, 16\}$

4. $\overline{X}$, g_D, and h_D where $D = \{8, 20\}$

Which of the four levels of measurement (nominal, ordinal, interval, ratio) is the following measured?

5. The amount of fat (in grams) in the 18 cookies in a box of Mallowmars.

6. The college in which a Kutztown University student has its major where 1 is the College of Liberal Arts and Sciences, 2 is the College of Education, 3 is the College of Business, and 4 is the College of Visual and Performing Arts.

7. The temperature of the water in Blue Marsh Lake at various depths.

8. The colours of automobiles on a used car lot.

9. The numbers of shirts for the Kutztown University soccer team.

10. The numbers on the shirts of the Kutztown University soccer team

11. The ages of a sample of 50 employees of the Lehigh Valley Hospital

12. The ages of the students in our statistics class.

13. A list of 1247 social security numbers

14. The final grades (A, B, C, D, or F) for students in our statistics class.

Consider the following. Determine whether the data are quantitative or are descriptive ('qualitative) of a characteristic which is not truly a quantity.

15. The colours of automobiles on a used car lot.

16. The numbers of shirts for the Kutztown University soccer team.

17. The numbers on the shirts of the Kutztown University soccer team

18. A list of 1247 social security numbers

19. The final grades (A, B, C, D, or F) for students in our statistics class.