

Z-Score: Extra Practice

Homework Grades - Unit 2

95, 95, 85, 78, 18, 88, 100, 75, 95

1. Calculate the mean and standard deviation.

$$\bar{X} = 81$$

$$Sx = 25$$

2. Calculate the z-score of the student who scored an 88% on HW. What does this number mean?

$$z = \frac{X - \bar{X}}{Sx}$$

$$z = \frac{88 - 81}{25}$$

$$z = 0.28$$

* 88% is 0.28 standard deviations above the mean.

3. Based on the z-score, would you consider a score of 18% on HW unusual? Why or Why not? * Unusual z-score outside -3 or 3

$$z = \frac{18 - 81}{25}$$

$$z = -2.52$$

not unusual bc its in range (-3 to 3)

4. Which student had a z-score close to 0.6?

$$z = \frac{X - \bar{X}}{Sx}$$

$$25 \cdot 0.6 = \frac{X - 81}{25} \cdot 25$$

$$z = 0.6$$

① multiply by denominator

$$\begin{array}{r} 15 = X - 81 \\ + 81 \quad + 81 \\ \hline \end{array}$$

② add

$$96 = X$$

* The homework grade of 95%.