1. The number of individuals is:

$$n = \sum_{k=1}^{K} N_k = 9465$$

Where K is the number of classes.

2. The mean is:

$$\bar{x} = \frac{1}{n}\sum_{k=1}^{K} N_k Z_k = 109.400$$

The variance is:

$$\sigma_x^2 = \frac{i}{n}\sum_{k=1}^{K} N_i (Z_i - \bar{x})^2 = 184.782$$

3. The new mean would be multiplied by 28.349:

$$\bar{x'} = \frac{1}{n}\sum_{k=1}^{K} (N_k Z_k * 28.349) =$$

$$= \frac{28.349}{n}\sum_{k=1}^{K} N_k Z_k = 28.349\bar{x} = 3101.38$$

The new variance would be multiplied by $28.349^2$:

$$\sigma_x'^2 = \frac{1}{n}\sum_{k=1}^{K} N_k (28.349 * Z_k - \bar{x'})^2 =$$

$$= \frac{1}{n}\sum_{k=1}^{K} N_k (28.349 * Z_k - 28.349 * \bar{x})^2 =$$

$$= \frac{(28.349)^2}{n}\sum_{k=1}^{K} N_k (Z_k - \bar{x})^2 = (28.349)^2 \sigma_x = 148502.974$$

4. Since there are 9465 individuals, the mean is the 4733rd individual, which is in the class 107. So the median (which is also $Q_2$) is between 103 and 111.

   $Q_1$ is close to the 2366th individual, which is in the class 91. So $Q_2$ is between 87 and 95.

   $Q_3$ is close to the 7099th individual , which is in the class 115. So $Q_3$ is between 111 and 119.