1. **Solution**
   Let x represent a datum of interest. Let i represent that datum's index. Let ℓ represent that datum's percentile. Let n represent the sample size (number of measurements). In general,

   $$\ell = \frac{i}{n}$$

   (a) We are given $x = 74.761$. This means $i = 11$. We know $n = 11$. Determine the percentile ℓ.

   $$\ell = \frac{11}{11}$$

   $$\ell = 1$$

   So, the percentile rank is $\boxed{1}$, or 100th percentile.

   (b) We are given $\ell = 0.909$. We can use algebra to solve for i.

   $$\ell = \frac{i}{n}$$

   Multiply both sides by n.

   $$n \cdot (\ell) = n \cdot \left(\frac{i}{n}\right)$$

   Simplify both sides.

   $$n\ell = i$$

   To make me happy, switch the sides.

   $$i = n\ell$$

   Now, we can evaluate i.

   $$i = (11)(0.909)$$

   $$i = 10$$

   Determine the x associated with $i = 10$.

   $$x = \boxed{74.276}$$

   (c) The mean: $\bar{x} = \frac{794.551}{11} = \boxed{72.232}$

   (d) If n is odd, then median is $x_{i=\frac{n+1}{2}}$, the value of x when $i = \frac{n+1}{2}$. Otherwise, if n is even, the median is mean of $x_{i=\frac{n}{2}}$ and $x_{i=\frac{n}{2}+1}$. In this case, $n = 11$ and so n is odd.

   $$\text{median} = x_{(11+1)/2,} = x_6$$

   So, median = $\boxed{70.959}$.

2. **Solution**
   Let x represent a datum of interest. Let i represent that datum's index. Let ℓ represent that datum's percentile. Let n represent the sample size (number of measurements). In general,

   $$\ell = \frac{i}{n}$$

   (a) We are given $x = 70.677$. This means $i = 3$. We know $n = 30$. Determine the percentile ℓ.

   $$\ell = \frac{3}{30}$$

   $$\ell = 0.1$$

   So, the percentile rank is $\boxed{0.1}$, or 10th percentile.

   (b) We are given $\ell = 0.967$. We can use algebra to solve for i.

   $$\ell = \frac{i}{n}$$

   Multiply both sides by n.

   $$n \cdot (\ell) = n \cdot \left(\frac{i}{n}\right)$$

   Simplify both sides.

   $$n\ell = i$$

   To make me happy, switch the sides.

   $$i = n\ell$$

   Now, we can evaluate i.

   $$i = (30)(0.967)$$

   $$i = 29$$

   Determine the x associated with $i = 29$.

   $$x = \boxed{72.772}$$

   (c) The mean: $\bar{x} = \frac{2152.273}{30} = \boxed{71.742}$

   (d) If n is odd, then median is $x_{i=\frac{n+1}{2}}$, the value of x when $i = \frac{n+1}{2}$. Otherwise, if n is even, the median is mean of $x_{i=\frac{n}{2}}$ and $x_{i=\frac{n}{2}+1}$. In this case, $n = 30$ and so n is even.

   $$\text{median} = \frac{x_{15} + x_{16}}{2} = \frac{71.818 + 71.838}{2}$$

   So, median = $\boxed{71.828}$.