**Handout 5: Calculate variance and standard deviation of runtime for 2010 mystery movies**

| Movie | $x$ | $x - \bar{x}$ | $(x - \bar{x})^2$ |
|---|---|---|---|
| All Good Things | 101 | 101-103=-2 | -2^2=4 |
| Edge of Darkness | 117 | 117-103=14 | 14^2=196 |
| Wrecked | 91 | 91-103=-12 | -12^2=144 |
| Sum | 309 | | 4+196+144=344 |

$$\bar{x} = 309/3 = 103$$

$$s_x = \sqrt{\sum_{i=1}^{n}(x - \bar{x})^2/(3-1)} = \begin{array}{l} \text{sqrt(344/(3-1))=} \\ \text{sqrt(344/2)=sqrt(172)=13.11} \end{array}$$

Name (Print and Sign): _____