**How to find any percentile**

Find 38th percentile, n = 11.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16.4 | 16.4 | 28.2 | 31.5 | 34.1 | 36.6 | 40.4 | 45 | 76.7 | 77.7 | 109.9 |

P% = (P/100)\*n = (.38)(11)

= 4.18

Index(4) + .18(Index(4+1)-Index(4))

* **Mean or** 
  + 1000,8,7,9,4 =>
* **Median** (if n is odd, then is the middle number)
  + =
  + 4,7,8,9,1000
    - (8+9) / 2 = 8.5

When you have normal distribution, then=

When skewed to right (Mean greater than median)

* "Positively skewed"

When skewed to left (Mean less than median)

* "Negatively skewed"
* **Shortcut for standard deviation**
* **Take square root of this :**

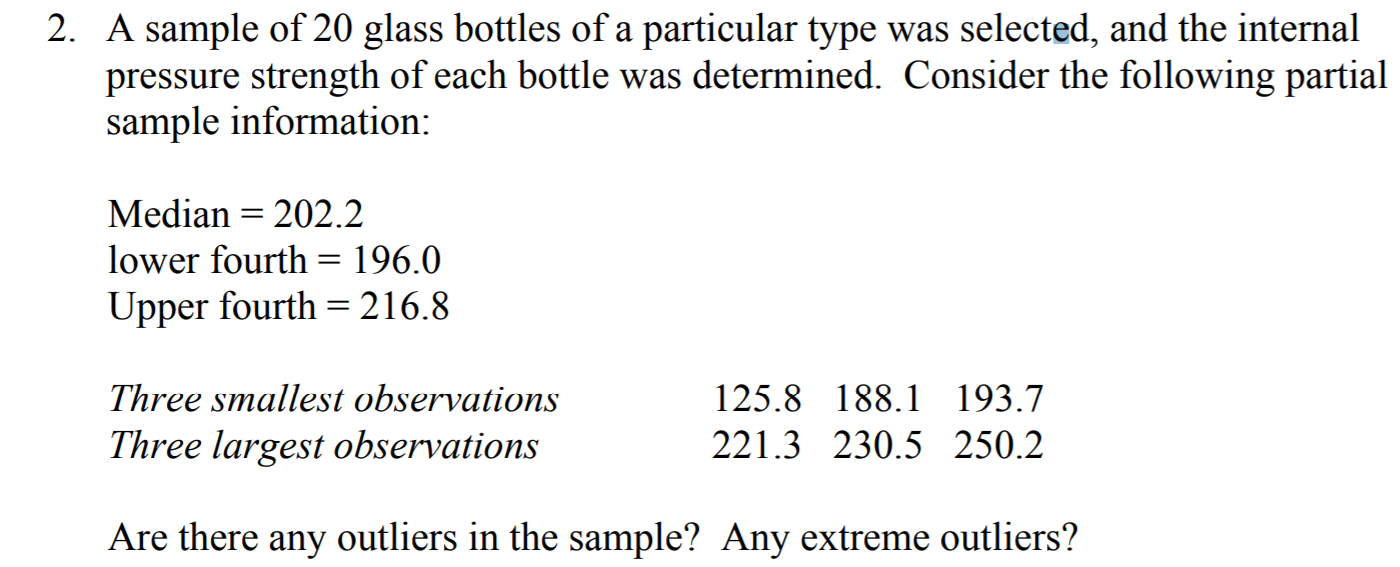
**Variance , S2 =**  Variance for population :

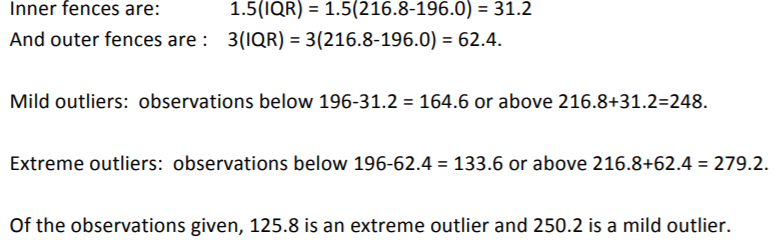
Sample size of 5

­

0

Use variance equation = 30





Chebyshev’s Rule

Minimal Spread =

K = no. of + and – std. dev from the mean

