

§2.3 #14 matches graph with #9

#20 order the data:

36, 38, 40, 43, 43, 49, 50, 52, 63
 ↑
 median

mode: 43

$$\text{mean} = \frac{36 + 38 + 40 + 43 + 43 + 49 + 50 + 52 + 63}{9}$$

$$= \frac{414}{9} = 46$$

#42

$$\text{weighted mean} = (95)(0.1) + (100)(0.1) + 89(0.3) + 100(0.1) + 92(0.4) = 93$$

§2.4 #13 order the data:

2, 2, 4, 5, 6, 6, 6, 7, 7, 8, 10, 10, 11, 12, 12, 13

$$\text{median} = 7, \text{ mode} = 6, \text{ mean} = \frac{2+2+4+5+6+6+6+7+7+8+10+10+11+12+12+13}{16} = \frac{121}{16} = 7.5625$$

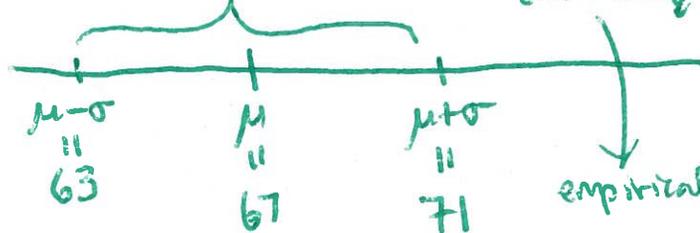
Variance = 11.38
 ↑
 not by hand, hahaha

Standard deviation = 3.273

#29) $\mu = 67, \sigma = 4$

(2)

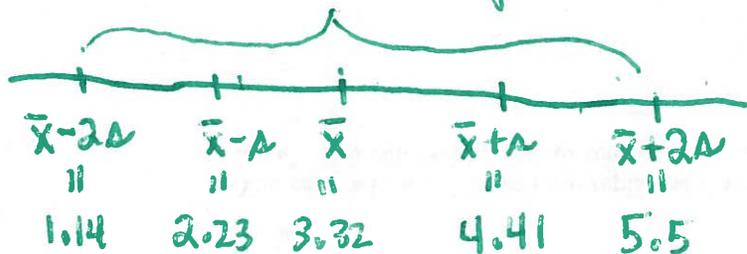
What percentage is within one standard deviation of the mean?



empirical rule \Rightarrow about 68%

#36) $\bar{x} = 3.32, \Delta = 1.09$

What percentage is within 2 standard deviations of the mean?



(must use Chebyshev Theorem
— data is not necessarily
bell-shaped)

Chebyshev's thm with $k=2$



$$1 - \frac{1}{2^2} = 1 - \frac{1}{4} = \frac{3}{4} = 75\%$$

of the data lies in the desired
interval