

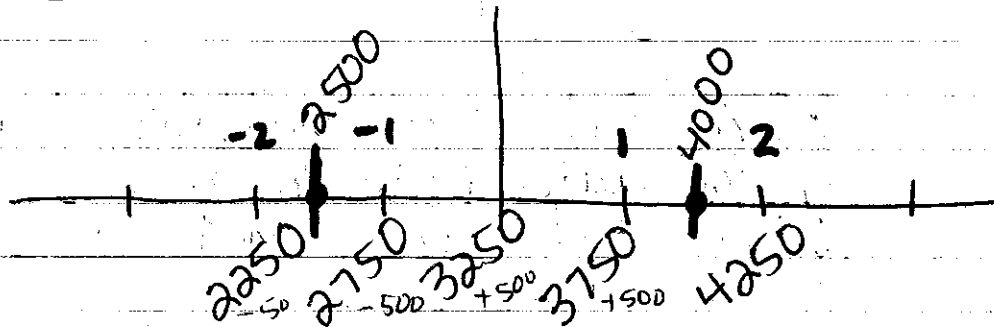
12.7 Normal Distributions

A normal distribution shows data that vary randomly from the mean. every normal curve has a bell-shape.

v#1: less than 3500g

(a) $1 + 5 + 23 + 42 \approx 71\%$

(b) mean = 3250



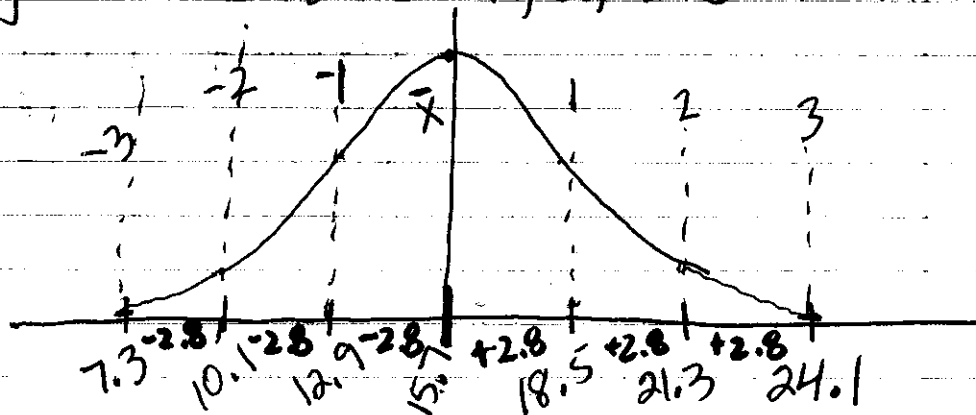
$23\% + 42\% + 23\% = 88\%$

→ are from the bars on graph in book

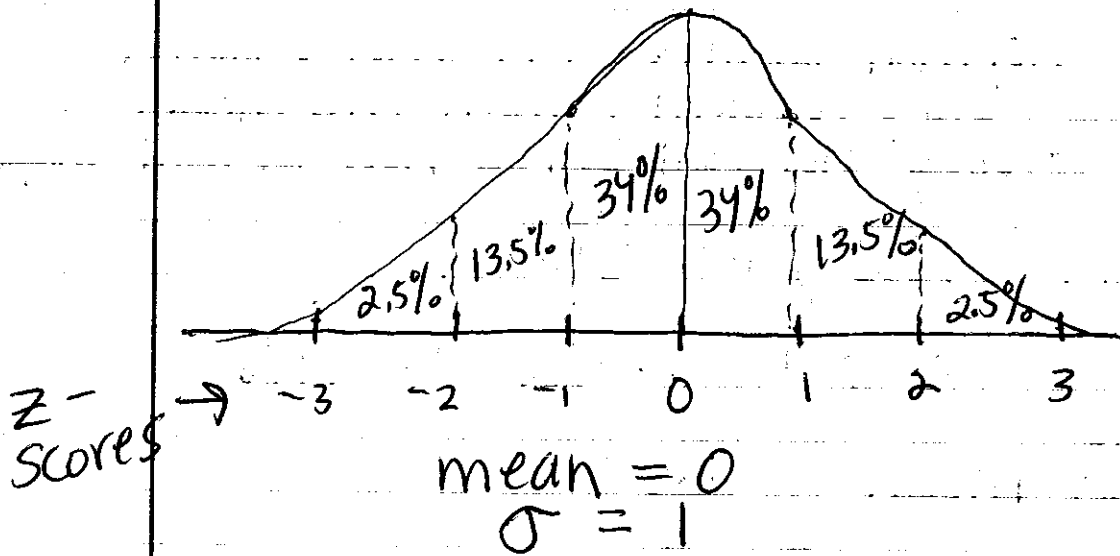
(ex2) mean = 15.7 (\bar{x})

$\sigma = 2.8$ st. deviation

Sketch a normal curve. show jaw widths at 1, 2, 3 σ 's from \bar{x}



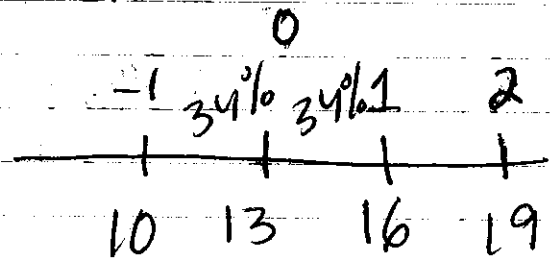
The Standard Normal Curve



68% data Fall within 1σ
 95% data Falls within 2σ 's
 100% data Falls within 3σ 's.

ex 3

mean = 13h
 $\sigma = 3h$



✓ #3 (a) 68%

between 10 + 16

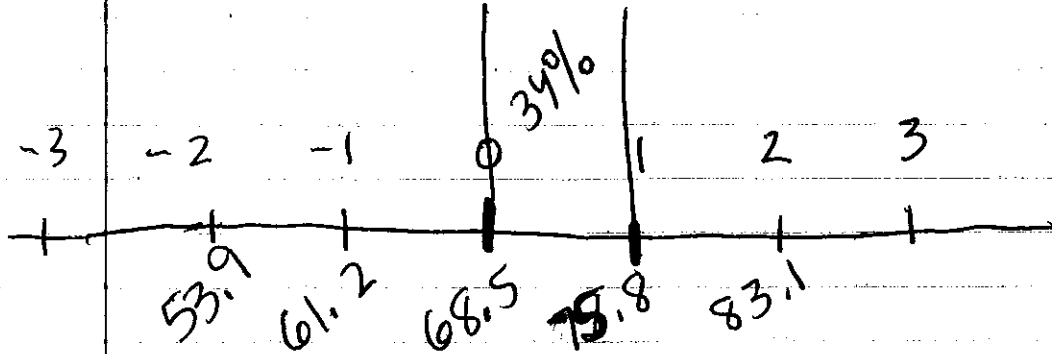
(b) between 16h to 19h

13.5% of 100 = 13.5 response

about 13 or 14 responses

ex 4

$$\bar{X} = 68.5 \quad \sigma = 7.3$$



$$(a) \quad 140(.34) = 47.6$$

≈ 47 or 48 students

$$(b) \quad 13.5\% + 2.5\% = 16\%$$

$$140(.16) \approx 22.4$$