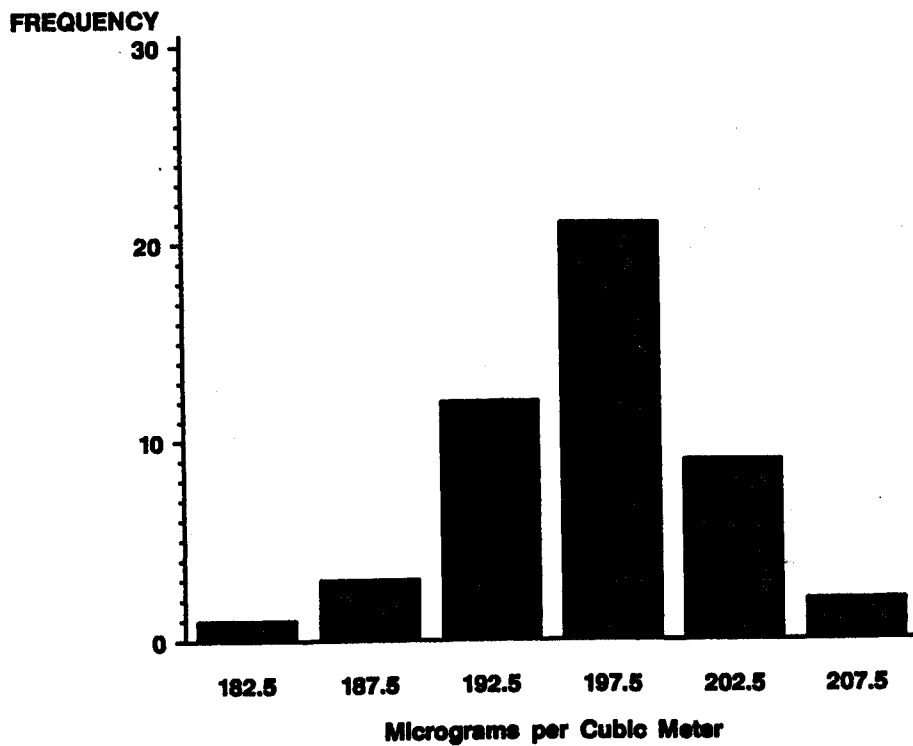


HW #1

1.13b, 1.32, and 1.37

(1.13b)



1.32

30 minutes:

$$\bar{X} = \frac{55+57+59+56+56+59}{6} = \underline{57.0}$$

$$s^2 = \frac{(55-57)^2 + (57-57)^2 + (59-57)^2 + (56-57)^2 + (56-57)^2 + (59-57)^2}{5}$$

$$s^2 = \underline{2.8}$$

$$s = \sqrt{2.8} = \underline{1.47}$$

75 minutes:

$$\bar{X} = \frac{57+55+58+59+59+59}{6} = \underline{57.83}$$

$$s^2 = \frac{(57-57.83)^2 + (55-57.83)^2 + (58-57.83)^2 + [(59-57.83)^2 \times 3]}{5}$$

$$s^2 = \underline{2.57}$$

$$s = \sqrt{2.57} = \underline{1.60}$$

1.37

$$\bar{X} = \frac{64.9 \times 1 + 65 \times 2 + 65.5 \times 1 + 66 \times 1 + 67 \times 1 + 67.8 \times 1 + 68 \times 1 + 68.1 \times 1 + 68.5 \times 1 + 69 \times 3 + 70 \times 3 + 70.1 \times 1 + 70.5 \times 1 + 70.8 \times 1 + 71 \times 6 + 71.8 \times 1 + 72 \times 2 + 72.8 \times 1 + 73 \times 1 + 73.5 \times 2 + 74 \times 2 + 75 \times 2}{36}$$

$$\bar{X} = \frac{2526.8}{36} = \underline{70.19}$$

$$s^2 = \frac{\sum (x_i - \bar{x})^2 \cdot f(x_i)}{36 - 1} = \frac{279.2}{35} = \underline{7.98}$$

$$s = \frac{\underline{\quad\quad\quad}}{\sqrt{7.98}} = \underline{2.82}$$