

HW117

1. Plot B because the data spread is larger

2. 89.95, 93.49, 93.49, 97.69, 103.39

median \rightarrow 93.49

mean \rightarrow 95.66

$$SD: (89.95 - 95.66)^2 + (93.49 - 95.66)^2 + (93.49 - 95.66)^2 + (97.69 - 95.66)^2 + (103.39 - 95.66)^2$$

$$= \sqrt{\frac{105.8957}{4}} = \boxed{5.15}$$

3. a) $5 + 14 + 9 + 7 + 8 + 3 + 3 = 59$ ~~49~~

b) $49/2 = 24.5$

third bin 700-800

c) $19/49 = \boxed{38.8\%}$

4. a) $\frac{1}{2}(5)(0.1) + \frac{1}{2}(15)(0.1) = 1 \checkmark$

b) $y = 0.02x$ $A = \frac{1}{2}(3)(0.06)$
 $y = 0.02(3)$ $A = 0.09 \rightarrow \boxed{9\%}$
 $y = 0.06$

c) rectangle - ~~sq~~ Δ

$$y = \frac{A}{150}x + b$$

$$0 = \frac{1}{150}(20) + b$$

$$-7/15 = b$$

$$y = \frac{1}{150}x - \frac{7}{15}$$

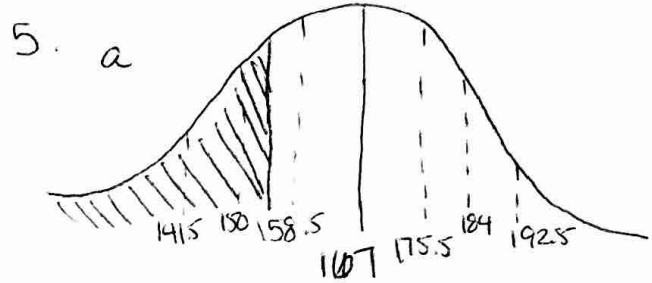
$$y = \frac{1}{150}(6) - \frac{7}{15}$$

$$y =$$

$y \approx 0.09$

$3(0.09) - \frac{1}{2}(3)(0.065) = 0.1725$

$\boxed{17.25\%}$



c) $z = \frac{155 - 167}{8.5} = -1.41$

on calculator

$\rightarrow 0.079 \rightarrow \boxed{7.9\%}$

6. mean = -2.5
SD = 3.98

7. LB: $-9 \cdot 10^{-99}$
UB: 2.18
 $\rightarrow 98.5\%$

8. LB: $-9 \cdot 10^{-99}$
UB: 1.6
 $\rightarrow 0.945$
 $1 - 0.945 = 0.055 \rightarrow 5.5\%$

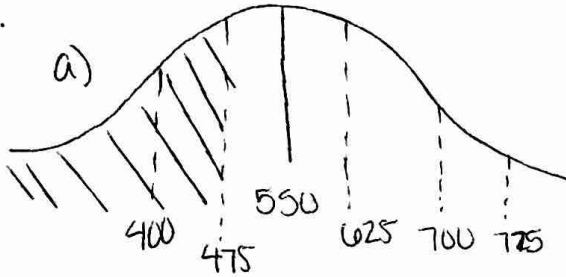
9. $z = 1$

$$10. 1.3 = \frac{x-42}{5}$$

$$6.5 = x - 42$$

$$\boxed{48.5 = x}$$

11.



$$50 - 34 = \boxed{16\%}$$

$$12. \text{a)} 50 + 34 + 13.5 = 97.5$$

$$\boxed{700}$$

$$13. \text{a)} 68 + 13.5 = \boxed{81.5\%}$$

$$14. z = \frac{10-13}{4} = -0.75$$

$$LB: -9 \times 10^{99}$$

$$UB: -0.75$$

$$\rightarrow \boxed{22.7\%}$$