$\mu_x = 7.4 \qquad \sigma_x = 0.6$

$\mu_y = 5.2 \qquad \sigma_y = 0.1$

$$E(aX+b)$$

1a) ? 1)

2) $(.6)^2 + (.1)^2 = \sqrt{.37} = 0.608$

b) 1) $5.2 - 7.4 = -2.2$

$V(y-x) = 1V(y) + (-1)^2 V(x)$

$= V(y) + V(x)$

2) $(.6)^2 + (.1)^2 = \sqrt{.37} = 0.608$

c) $V(aX+B) = a^2 V(x)$

$V(t) = 4V(x) + 9V(y) \Big\}_2$

$4(.6)^2 + 9(.1)^2$

$- \quad 1.44 + .09$

$\textcircled{1}$

$\boxed{f(x)}$

---

2. a) mean? $X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X_7$

$= 23.8$

b) $7 * \sigma^2 = \sqrt{.28} = .529$

---

7 a) point estimate : single value used to estimate pop. parameter

ex: sample mean x is p.e. of pop mean μ

* mean of given points

b) 1,428,000 $\rightarrow$ 119 * 12,000

c) 8/10 are above 100 $= .8$

d) mean of sample points

e) $\tilde{x}$

6 a) if estimator is unbiased, then mean of
      estimation is = to true value
   b) variance of estimator measures how close
      repeated values of estimator are to each
         other

---

5 a) mean = $\frac{35 \cdot 2 + 49 \cdot 2}{}$ = 168

   SD = $\sqrt{.1^2 + .1^2 + .3^2 + .3^2}$ = .447

   b) mean = 168 (")
      SD = ?

---

3 a) 115,240   27(220) + 125(260) + 512(750)

   b) $27^2(9^2)$ + $125^2(132)$ + $512(6^2)$

   another version

   $210^2(100)$ + $250^2(132)$ + $100^2(60)$ = $\sqrt{15,332500}$

   4,410,000   10,562,500   360,000   = 3,915.673632

   ①

4) mean

      add = 65

   $1^2 + 2^2 + 1.1^2$ = SD

      2.492

   normalize $X - \bar{X}$

      $\frac{60 - 65}{2.492}$ = $\frac{-5}{2.492}$

                = -2.006   find on
                  .0228   ars

5) $\sqrt{2^2 \cdot 1^2 + 2^2 \cdot 3^2}$