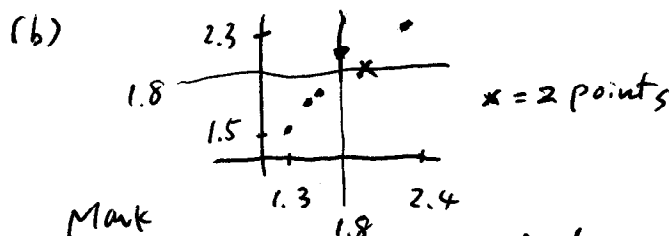


① (b) 6 (c) 6 (d) $\sqrt{\frac{(-1)^2 + 1^2 + 3^2 + 0^2 + 6^2 + 4^2 + 1^2}{7-1}} = \dots$ (e) :

① (a) as done in class. Ans: $\frac{0.5}{\sqrt{0.68} \sqrt{0.4}} = \dots$ (f) s
work out



Mark the maximum and Minimum first

then Mark the mean :

Make sure points are on the ~~right~~ correct quadrant

③ $X \sim \text{Normal, mean} = 1, SD = 0.05, Y \sim \text{Normal, mean} = 1, SD = 0.05$

optimal A : $P(10X > 11)$

optimal B : $P(5X + 5Y > 11)$

$E(10X) = 10, E(5X + 5Y) = 10$

$SD(10X) = 10 \cdot 0.05 = 0.5$

$SD(5X + 5Y) = \sqrt{25 \cdot (0.05)^2 + 25 \cdot (0.05)^2} = \sqrt{2} \cdot 5 \cdot 0.05$

$P(10X > 11)$
 $= P(Z > \frac{11-10}{0.5})$
 $= P(Z > 2)$

$P(5X + 5Y > 11)$
 $= P(Z > \frac{11-10}{\sqrt{2} \cdot 0.25})$
 $= P(Z > 2.828)$

option B has smaller risk, so is better.



same
as (c)

one as (d)

1

—

t_s

near 1

$D=0.05$

$\overline{0.5)^2}$

)

)

