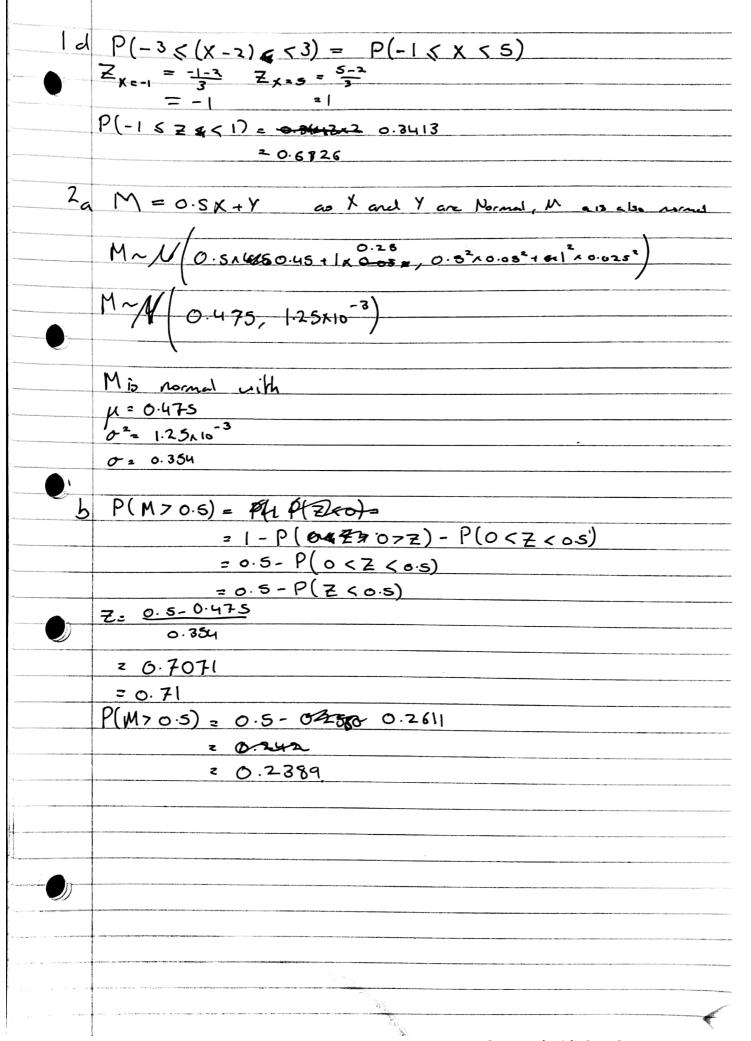
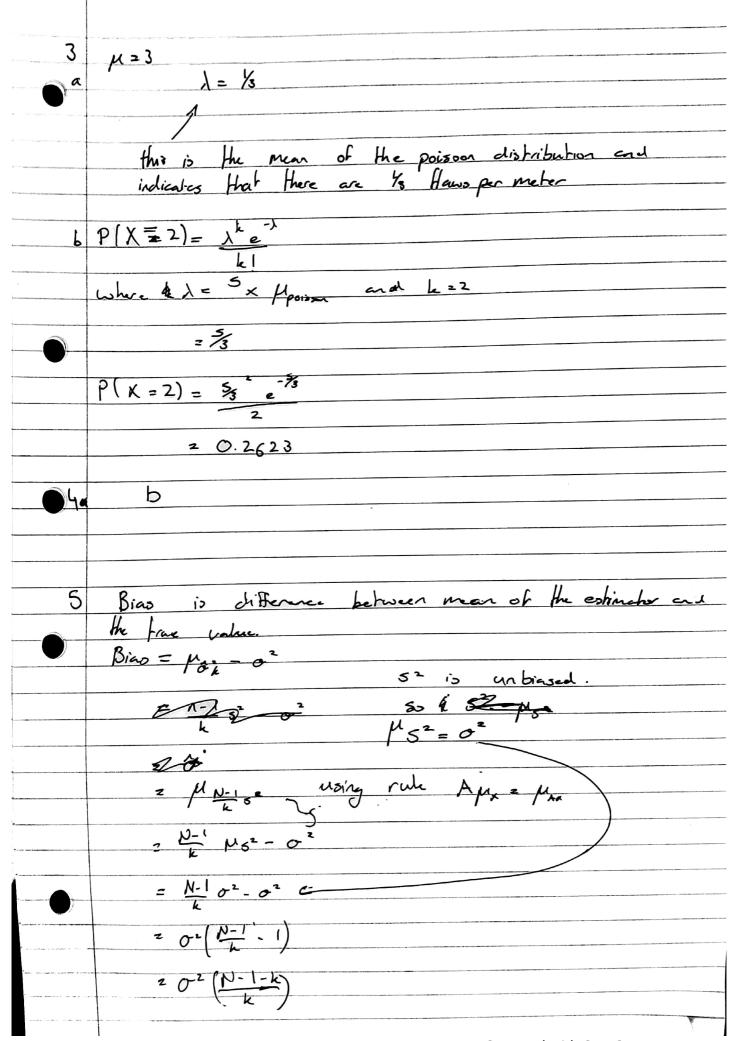
Aso 6 Berfell, Josh ECEN321 $X \sim N(2, 9)$ Using Z table in lecture olide.

which contains probabilities up to
the mad Z score from the µ= 2 Z= 2-4 For P(X72) $P(X \gg 2) = P(Z \gg 0)$ ≈ 0.5818 P(-2.5 ≤ X ≤ -1) $Z_{x=-2s} = \frac{-2.5-2}{3}$ $Z_{x=-1} = \frac{-1-2}{3}$ P(-1.5 < Z < -1) = 0.4332 - 0.3413 2 0.0919

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5b Ind:
$$\sigma_{31}^{2} = \frac{20^{4}}{N-1}$$

$$f(a) \quad \sigma_{31}^{2} = \frac{20^{4}}{N-1}$$

$$f(a) \quad \sigma_{31}^{2} = \frac{20^{4}}{N-1}$$

$$= \frac{(N-1)^{2}}{k^{2}} \times \frac{20^{4}}{N-1}$$

52	$\frac{d_{MSC}}{dk} = 0 \frac{d}{dk} \left(\frac{N^2}{k^2} - \frac{2N}{k} + \left + \frac{2}{k} - \frac{1}{k^2} \right \right)$
	$= O^{4} \left(\frac{-3N^{2}}{k^{3}} + \frac{2}{k^{2}} + \frac{2}{k^{3}} + \frac{2}{k^{3}} + \frac{2}{k^{3}} \right)$
	=0
	$\frac{-2N^{2}}{k^{3}} + \frac{2N}{k^{2}} + \frac{2}{k^{3}} = 0$
	$-2N^{2}+2kN-2k+2=0$
	$2kN-2k=2N^2\hat{7}^2$
•	(2N-2) L = 2N2-2 L = 2N2-2 MID MINIMINES The Earnse
• 6	2N-2 J
6	$\int \left(x \right) = \frac{1}{\sqrt{2\pi\sigma^3}} e^{\frac{(x-\mu)^3}{2\sigma^3}}$
	$f(x, \dots K_n) = \underbrace{X} \prod \int (x_i, \mu_i)$
	$= \prod_{n=1}^{\infty} \frac{1}{\sqrt{2\pi^n}} e^{-\frac{(\mu_n^n \mu_n^n)^n}{2\pi^n}}$
	i=(
	$= e^{\left(\frac{\sum_{i=1}^{n}(x_{i}-\mu)^{n}}{2}\right)} e^{\frac{1}{n}} + \frac{1}{n} + \frac{1}{n} + \frac{1}{n} = 0$
	(2TI) 1/2.
	$\left \bigwedge_{i} f\left(x_{1} \dots x_{A} \right) \right = -\frac{1}{2} \left \bigwedge_{i} \left(2\pi \right) - \sum_{i} \left(x_{i} - \mu \right)^{2}$
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6 cont

$$\frac{\partial \ln(f(x_1...x_n))}{\partial \mu} = \frac{-1}{2} \left(-2\sum_{i=1}^{n} x_i + 2N\mu\right)$$

$$\hat{\mu} = \sum_{i=1}^{N} x_i$$