

Department of Mathematics
MTL 601 (Probability and Statistics)
Tutorial Sheet 3
Answers to selected problems

6. 81.85%
7. $\mu = 2.464, \sigma = 0.0346$
18. $\frac{3e^4}{1+3e^4} = 0.994$.
19. 0.5.
21. (a) $\alpha = \frac{1}{8}, \beta = \frac{1}{4},$ and $\gamma = \frac{5}{8}$.
- (b) PMf of X is $P(X = x) = \begin{cases} 1/8, & x = 0 \\ 1/4, & x = 2 \\ 5/8, & x = 4 \\ 0, & \text{elsewhere} \end{cases}$
- (c) $\frac{89}{8}$.
22. (a) X follows Poisson(μ).
- (b) $e^{-4} \sum_{i=1}^7 \frac{4^i}{i!}$.
23. (a) $\frac{3}{7}$ and (b) $\frac{6}{7}$.
26. 0.156.
32. 0.18.

I Semester 2023-24