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EC10003 – Introductory Statistics

Additional Notes: Class4

(1) For those of you who have the 5th edition, please see the below table (note, not all are included here and there are additional questions in the 6th ed.. It's always best to check yourself too in case I've made a mistake!) Hope this helps.

| 6 th Edition Question Number | 5 th Edition Question Number |
|---|---|
| 5.36 | 5.21 |
| 5.44 | 5.29 |
| 5.55 | 5.35 |
| 5.57 | 5.37 |
| 5.64 | 5.39 |
| 5.92 | 5.57 |
| 6.5 | 6.1 |
| 6.7 | 6.3 |
| 6.13 | 6.5 |
| 6.15 | 6.7 |

(2) Note Questions 11 and 12 are from last year's mid-term exam.

(3) Note that the answer to 11.iii can be obtained by realising this is a discrete distribution (you cannot have 2.7865 people for example), so that $P(2.5 \leq x \leq 3.5)$ is equal to $P(x=3)$.

(4) Some additional help for Question 14, which you may or may not find helpful. It is a bit tidier and more elegant than the answer on the solutions:

By definition: $\text{Var}(X) = E[(X - E(X))^2]$
 $= E[X^2 + (E(X))^2 - 2XE(X)]$ by simple expansion (see last week's exercises)
 $= E(X^2) + (E(X))^2 - 2(E(X))^2$ by bringing the expectations operator inside the brackets (note, we do this AFTER having expanded the brackets)
 $= E(X^2) - (E(X))^2$

(5) ****THE FORMULA SHEETS GIVEN TO YOU IN THE EXAM CAN BE OBTAINED BY DOWNLOADING LAST YEAR'S FINAL EXAM ON MY WEBSITE OR THROUGH THE LIBRARY WEBSITE****