STAT 2507

Lab 3

Today’s Tutorial

- Common mistake from A2
- Quick review: CDFs
- Using SPSS to get the CDF for $X \sim \text{Binomial}(n = 15, p = 0.4)$

Common mistake from A2

- Not very many common mistakes since A2 was really well done!
- Previous email contains some general examples of where students lost marks (not about specific questions)
- Specific question: The SPSS question
  - Students said that the relative frequency for n = 10,000 was closest to the true probability, even though it wasn't!
  - Just because that's what we expect to happen doesn't mean it will always happen -- there's randomness involved (check the Tutorial 2 where we discussed this in more detail)

Review: What's a CDF?

- **C**umulative **D**istribution **F**unction
- It's the probability that the random variable takes a value less than or equal to what's specified; i.e., F(x) = P(X <= x)
- Starts at 0, goes up to 1
- Consider the previous example

X	1	2	3	4	5	6
P(X = x)	0.15	0.1	0.4	0.05	0.2	0.1
F(x)	0.15	0.25	0.65	0.70	0.90	1

What would F(0) be? What about F(7)?