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22C:019 Homework 5

$\wedge \vee \neg \rightarrow \leftrightarrow \exists \forall \cap \cup \leq \geq$

page 451

22. 33/100

24a. 1/593775

30. 35/3838380

page 466

6b. 1/2

page 467

10d. .9230

12. $P(E \cup F) \geq P(E)$

$P(E \cup F) = P(E) + P(F) - P(E \cap F)$

$.8 + .6 - P(E \cap F) \leq 1$

$.4 \leq P(E \cap F)$

18c. $7 - (48/7)$

24. 1/16

page 468

34a. n = independent Bernoulli trials carried out

$(1-p)^n$

34d. $1 - (1-p)^n$

page 475

6. .3006

page 492

8a. $P(E/E_1) = (99.9\% \times (1/10000)) / (99.9\% \times 1/10000 + (.02\% \times 9999/10000))$
 $= 33.31\%$

b. .999