Name __________________

Mat 116: Homework 1
Covers Chap 1, 2, 3

1. p. 36, Q24

\[ P(A) = \{ \text{romantic comedies, documentaries, and anything with Jackie Chan} \} \]
\[ P(B) = \{ \text{romantic comedies, war movies, and anything with Jim Carey} \} \]

\[ P(A \cap B) = \text{romantic comedies} \]

2. p. 36, Q26

3. p. 37, Q34

4. p. 38, Q42

\[ P(A) = 48 \text{ teachers} \]
\[ P(B) = 65 \text{ teachers} \]
\[ P(A \cap B) = 15 \text{ teach at both} \]

How many teachers are at School A and School B?

General Counting Formula
\[ P(A \cup B) = P(A) + P(B) - P(A \cap B) \]
\[ P(A \cup B) = 48 + 65 - 15 = 98 \text{ total teachers} \]
5. p. 61, Q36
6. p. 61, Q38
7. p. 62, Q42