Quiz 2

10 minutes, 20 points. No devices with on/off switches, books, or notes may be used. The University's academic integrity policy governs the conduct of this quiz.

1. Construct a truth table for $Q \vee (\neg P \wedge Q)$. Use the table below to record your answer. Add as many columns as you need to help with the computation.

P	Q	
T	T	
T	F	
F	T	
F	F	

2. Let $A = \{1, 2, 3, 4\}$ and $B = \{1, 3\}$. Find the elements of the set $A \times (A \setminus B)$. Check your answer by computing $|A \times (A \setminus B)|$.

3. Let A, B, and C be three arbitrary sets.

    (a) Draw a Venn diagram that shows the general relationships among these sets.

    (b) Draw horizontal lines on the diagram to indicate the set $A \cap B$

    (c) Draw vertical lines on the diagram to indicate the set $(A \cup B) \setminus C$