EconS 527- Homework #2 (Due on August 29th, 2018)

1. Consider the following three bundles:

$$(x_1,x_2) = (2,2)$$
$$(y_1,y_2) = (4,1)$$
$$(z_1,z_2) = (5,2)$$

   Is transitivity satisfied? Discuss your answer [Hint: consider the example about indistinguishable alternatives discussed during class]

2. Provide an example (different than the one discussed in class) to support that changes in preferences violate transitivity.

3. Discuss whether the following functions are monotone or strongly monotone:

$$v(y,z) = \min\{3y,2z\}$$

$$v(y,z) = 5y + 3z$$

   In addition, discuss if the above functions satisfy convexity or/and strict convexity.

4. Explain monotonicity and strong monotonicity in preference relations, and compare them. Provide an example where a bundle *x* is (strictly) preferred to bundle *y* when preferences satisfy strong monotonicity, but *x* is not necessarily preferred to *y* under monotonicity.

5. Discuss the main differences between the Choice Based Approach and the Preference-Based Approach. Provide an example that highlights such differences.