N3CS20 Practice Set 22a

Instructions: Answer each question on loose leaf, quad-ruled (graph paper), headed properly and written in lead-graphite. Remember to fold paper along the center, work exercises in order top to bottom, left column then right column. Staple multiple pages

1. All functions are relations, but not all relations are functions. Justify this statement; use examples to support your response.

2. State whether each ordered pair is a function or just a relation, and explain why.
   a) $(3,6),(-3,2),(4,6),(-6,3)$
   b) $(2,-3),(7,1),(-6,4),(2,3),(7,-1)$
   c) $(5,-4),(6,2),(4,2),(3,-4)$

3. Gv1 p331 #1
4. Gv1 p331 #2
5. Gv1 p331 #3
6. Gv1 p331 #4
7. Gv1 p331 #5
8. Gv1 p331 #6
9. In Albert Einstein's famous equation, $E = mc^2$, $E = f(m)$, where m is an object's mass and c is the speed of light, a constant.
   Is the function $E = f(m)$ linear or non-linear? Justify your argument with evidence.