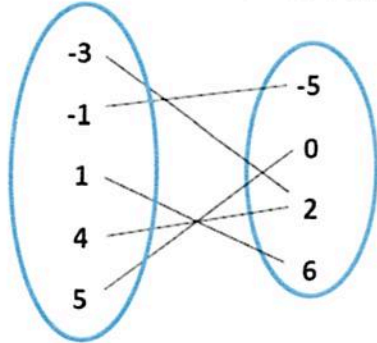


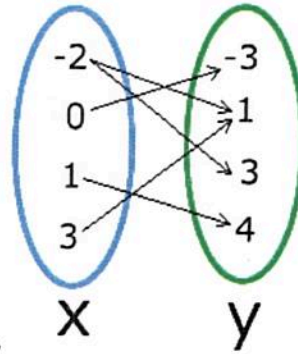
Instructions: Show all work. Partial credit can only be given where work is shown. Be sure to answer all parts of each question. You may not use a calculator on this quiz.

1. For each of the relations shown, write out the list of ordered pairs that represents the relation. Then determine if the relation is a function.



a.

$\{(-3, 2), (-1, -5), (1, 6), (4, 2), (5, 0)\}$
function



b.

$\{(-2, 1), (-2, 3), (0, -3), (1, 4), (3, 1)\}$
not a function

2. For the function $f(x) = x^3 - 2x + 1$, give the range if the domain is $\{0, 1, 2, 4\}$.

$\{1, 0, 5, 57\}$

3. Write the numerals in the indicates system into the Hindu-Arabic system.

a. MCM ~~CL~~ $LXXXIX$

1989

b. $\llcorner \text{YYY} \llcorner \llcorner \text{YYY} \llcorner$

$60[10+3(1)] + [10+8(1)]$
 $13(60) + 18$

798