Name: _____   **Signature:** _____   **Student Number:** _____

1. For each of the following functions, determine whether they are injective, surjective, or bijective.

   For each function consider each property, and justify your answer.

   (a) $f : \{-1, 0, 1\} \to \{-1, 0, 1\}$ defined by $f(x) = x^2$.

   > ANSWER:

   (b) $g : \{0, 1, 2\} \to \{1, 3, 5\}$ defined by $g(x) = 2x+1$.

   > ANSWER:

   (c) $h : \mathbb{N} \to \mathbb{N}$ defined by $h(x) = x^3$.

   > ANSWER: