**A1.6.1:**

(a) A function such that $x \neq y$ implies $f(x) \neq f(y)$

(b) Horizontal line test

**A1.6.2:**

(a) $f^{-1}(y)$ is defined for $y$ as the unique $x$ such that $f(x) = y$.

(b) Solve for $f(x)$

(c) Flip along the line $y = x$

**A1.6.3:** Is one-to-one

**A1.6.4:** Is one-to-one

**A1.6.5:** Is not one-to-one. For example multiple $x$ map to 0

**A1.6.6:** Is not one-to-one. For example multiple $x$ map to 0

**A1.6.7:** Is one-to-one.

**A1.6.8:** Is one-to-one

**A1.6.9:** Is one-to-one

**A1.6.10:** Is not one-to-one. Graph is a parabola

**A1.6.11:** Is not one-to-one.

**A1.6.12:** Is one-to-one.

**A1.6.13:** Is not one-to-one.

**A1.6.14:** Should be one-to-one.

**A1.6.15:** Skip

**A1.6.16:** Skip

**A1.6.17:** 2

**A1.6.18:**

(a) $x = 0$

(b) $x = 5$

**A1.6.19:** $x = 0$

**A1.6.20:**

(a) Passes the vertical line test

(b) The domain of $f^{-1}$ is the range of $f$, $[-2, 2]$. The range of $f^{-1}$ is the domain of $f$, $[-3, 3]$

(c) 2