Name: _____

# Quiz 1

## Math 111

You have 20 minutes to complete **both sides** of this quiz. When you're finished, first check your work if there is time remaining, then turn it in. You may use a scientific calculator, but not a graphing one. **Show all your work.**

**1.** (8 points) Let $f(x)$ be a function defined by the following table.

| $x$ | $f(x)$ |
|-----|--------|
| $-5$ | 0 |
| 0 | 1 |
| 2 | 0 |

a) What is $f(2)$?

b) For what value or values of $x$ is $f(x) = 0$?

**2.** (8 points) Let $h(t) = \sqrt{t+1}$.

a) Determine the domain of $h$ and express your answer in interval notation.

b) Write a sentence interpreting your answer to part a).

**3.** (8 points) A student commutes daily from home to campus. The time it takes her to drive that commute is inversely proportional to the speed at which she drives.

a) Write an equation for the student's travel time, $t$, in terms of her speed, $v$, and an unknown constant $k$.

b) When the student drives at 60 miles per hour for the entire commute, it takes her half an hour to reach campus. Use this information to solve for any unknown constants in your answer to part a).