Math 162
Quiz 2
Form A

Show all work in a neat and organized fashion. Clearly indicate your answers.
10 points possible.

1. (2 pts.) Consider this pair of functions.

$V(z)$ = your score out of 100 on the first test in this course when you studied z hours the week before the test.

$Q(v)$ = your letter grade on the first test in this course when you scored v points out of 100 on it.

These two functions can be combined by function composition. Which of the following is the correct new function? $Q \circ V$, $Z \circ Q$, $V \circ Q$, $Q \circ Z$, $Z \circ V$, $V \circ Z$

2. (2 pts.) Let $g(p) = p^2 - 3p + 8$ and $p(m) = m^2 + 5$. Find $g(p(m))$. You do not have to simplify your answer.

3. (3 pts.) Consider

$$S(t) = \frac{150}{1 + 83e^{-.6t}}; \qquad S(t) = 76.4$$

(a) Is $S(t) = 76.4$ an input or an output value?

(b) Find the output or input that corresponds to $S(t) = 76.4$. Round your answer to four decimal places.

4. (3 pts.) Consider

$$S(t) = \frac{150}{1 + 83e^{-.6t}}; \qquad t = 13.6$$

(a) Is $t = 13.6$ an input or an output value?

(b) Find the output or input that corresponds to $t = 13.6$. Round your answer to four decimal places.