

## QUIZ 9

Name \_\_\_\_\_

1. Find the formula for a rational function of the form  $y = \frac{ax}{x+b}$  which has a vertical asymptote at  $x = 2$  and a horizontal asymptote at  $y = 5$ .
2. A grapefruit is tossed straight up into the air with an initial velocity of 50 ft/sec. The grapefruit is 5 feet above the ground when it is released. Its height at time  $t$  is given by  $y = -16t^2 + 50t + 5$ . What is the maximum height the grapefruit reaches?
3. Find the absolute (global) maximum and minimum for the function  $y = x^3 - 4x^2 + 4x$  on the interval  $0 \leq x \leq 4$ .