

# ALGEBRA 1 B PART 2

## SAMPLE WORK 4

On a sheet of paper, complete the following questions. Then take a picture of your work and submit it in the drop box for Sample Work 4. Alternatively, print this page out and write out your steps here. Be sure to show all relevant steps.

- Graph  $y = -0.5x^2$
- A baseball is thrown with an upward velocity of 200 ft/s. The height of the ball,  $h$ , in feet after  $t$  seconds is given by the formula,  $h = -16t^2 + 200t + 6$ . What is the ball's maximum height? How long does it take for the ball to reach its maximum height? Round to the nearest hundredth.
- Solve  $3x^2 = 5x + 2$
- How many real-number solutions does the equation have?  $y = -2x^2 + 4x - 5$
- Solve the system.  
 $y = -2x + 3$   
 $y = -x^2 + 4x + 3$
- Simplify  $\sqrt{504}$
- Simplify  
 $(2x^3 + Bx^2 - 7x - 18) \div (2x + 3)$
- Solve  $\frac{1}{x+4} - \frac{2}{x} = 6$
- Use the data {1, 1, 1, 3, 3, 5, 7, 7, 9, 11, 13, 14} to create a histogram with 5 bins.
- Use the data from question 9 to make a box-and-whisker plot.