Name_____

Advanced Algebra

Unit 6: Assignment #17 Linear Programming Review for Test

The test is clearly two parts. Part one is like problems from this review and Part 2 is dealing with matricies.

1) Solve $|3x - 18| \leq 54$

2) $|2x + 20| \geq 532$

3) At what point do the boundary lines for the following system of inequalities intersect?

$$\begin{cases} 2x + 8y < 44 \\ x - y > -3 \end{cases}$$

A.	B.	C.	D.
$(-4, 1)$	$(2, 5)$	$(-6, 18)$	$(4, 5)$

For the following 2 problems first make a graph showing the parabola and the line. Then use your graph to interpret the answer that you are looking for.

3) $-x^2+6x-7 > -x+1$

Answer to where $-x^2+6x-7 > -x+1$

4) $-(x+3)^2+3<x+2$

Answers to where

$-(x+3)^2+3<x+2$

5) Shade to find the correct feasible region.

$$\begin{cases} y \geq x^2 - 6x + 7 \\ y \leq |x - 2| \end{cases}$$

6) What is the intersection of $\begin{cases} x + y \leq 9 \\ 2x - y \geq 3 \end{cases}$

7) I am selling computers. Desktops and laptops.
I am in charge of inventory at Best buy. I need to make sure to maximize what I can hold in the store. I will be stocking laptops and desktops. Each laptop costs $200 and each desktop costs $500. I have $48,000 to spend in total. I have room for 200 items all together. I have to have in stock at least 50 laptops or I get in trouble. I don't want to get in trouble 😖
Graph and shade the feasible region.