

Midterm Review

Solve each equation.

1) $-2|a + 3| = -12$

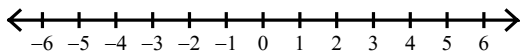
2) $1 + |8x| = -23$

3) $10|-2 + x| = 40$

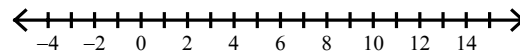
4) $|x - 7| - 4 = 6$

Solve each inequality and graph its solution.

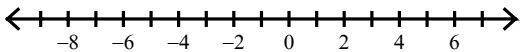
5) $|-3b| - 6 > 3$



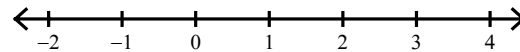
6) $2|m - 5| \geq 10$



7) $|v + 2| + 7 < 13$

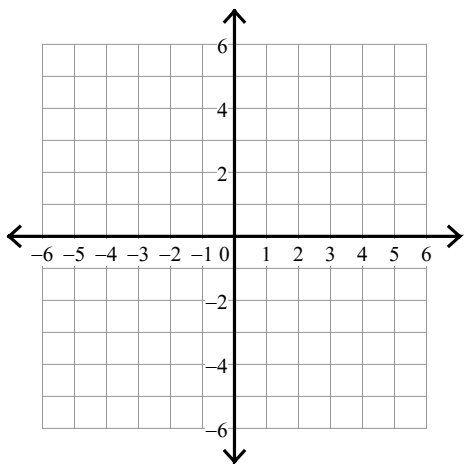


8) $|b - 1| + 4 \leq 6$

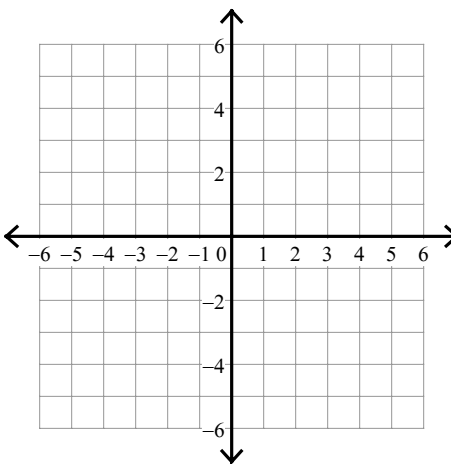


Graph each equation.

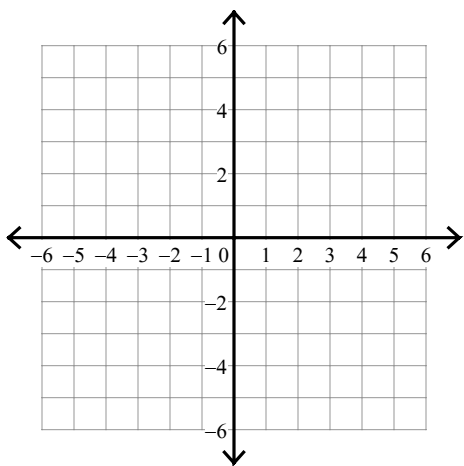
9) $y = |x + 2|$



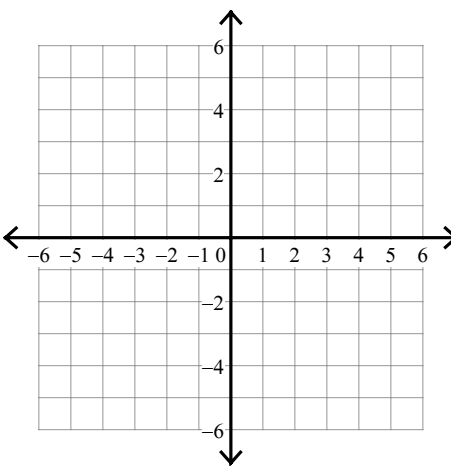
10) $y = |x| + 2$



11) $y = |x - 3| - 3$

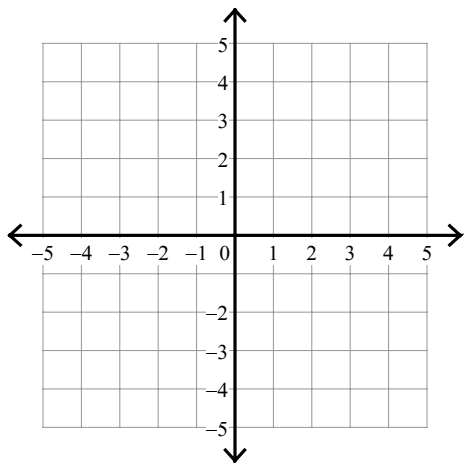


12) $y = -|x + 4| - 1$

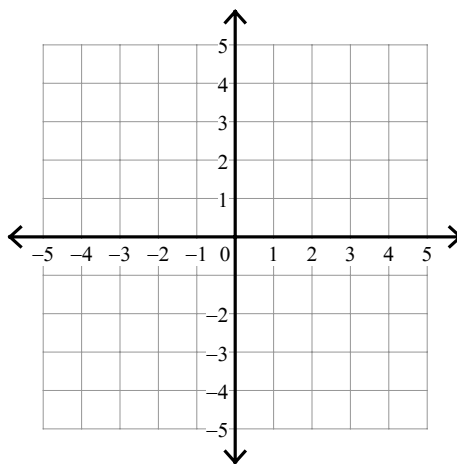


Sketch the solution to each system of inequalities.

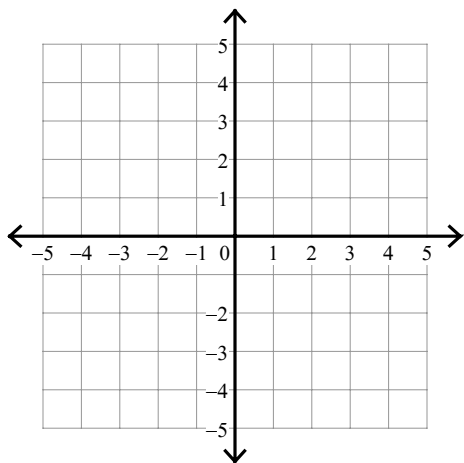
13) $y > -3x - 1$
 $y \leq x + 3$



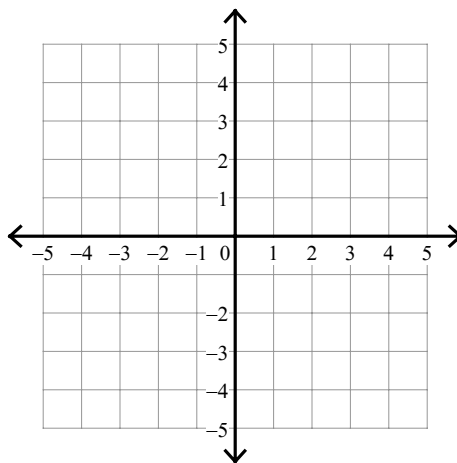
14) $y \leq -\frac{1}{2}x + 2$
 $y > -3x - 3$



15) $y \leq -2x + 2$
 $y > -2$



16) $x - y < 1$
 $x + 3y \leq 9$



Write the system of equations and solve.

17) Tickets to the baseball games cost students \$3 and adults \$5. On Friday, 247 tickets sold for a total of \$865. How many of each ticket was sold?

18) The school bought baseballs for \$4 each and softballs for \$7 each. If a total of 76 balls cost \$400, how many of each ball were bought?

Solve the system of equations.

19) $x + 3y - z = 1$
 $-2x - 6y + z = -3$
 $3x + 5y - 2z = 4$

20) $x + 4y - z = -7$
 $2x - y + 2z = 15$
 $-3x + y - 3z = -22$

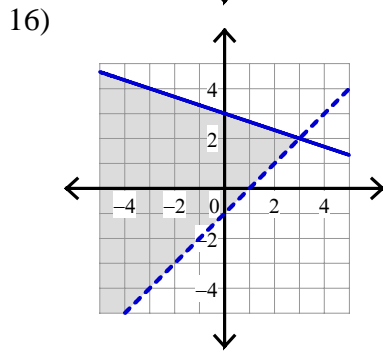
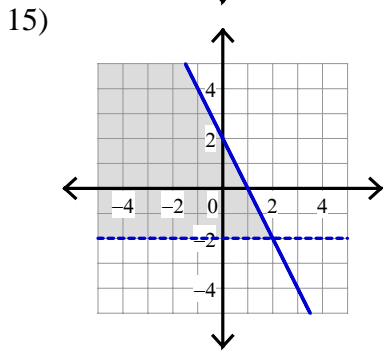
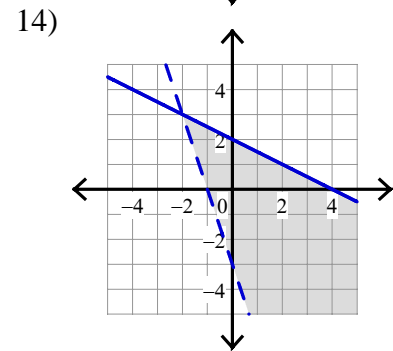
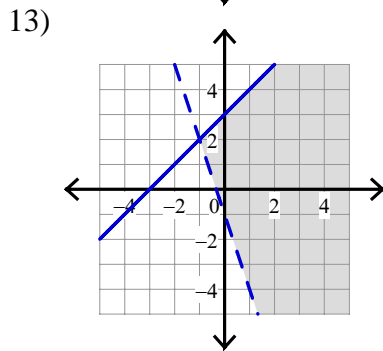
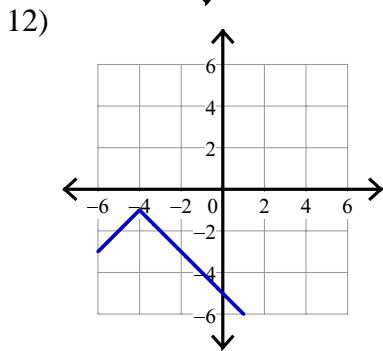
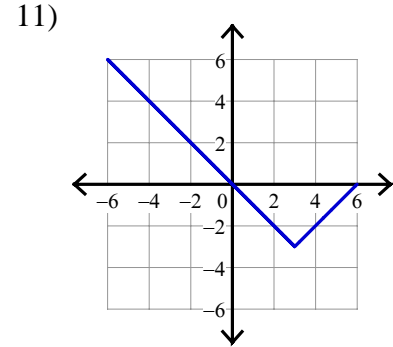
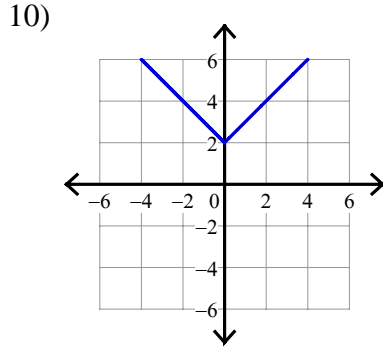
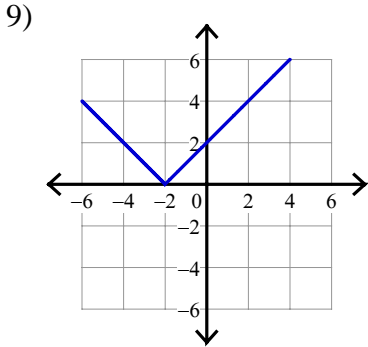
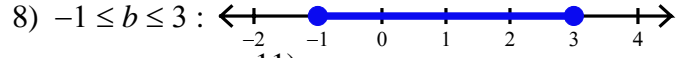
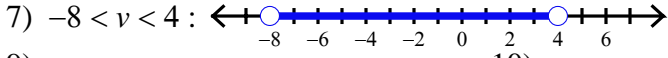
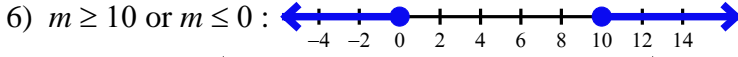
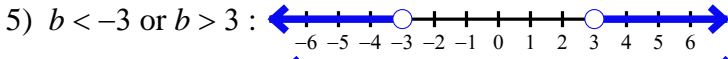
Answers to Midterm Review (ID: 1)

1) $\{3, -9\}$

2) No solution.

3) $\{6, -2\}$

4) $\{17, -3\}$



17) 185 student tickets, 62 adult tickets

18) 44 baseballs, 32 softballs

19) $(2, 0, 1)$

20) $(2, -1, 5)$