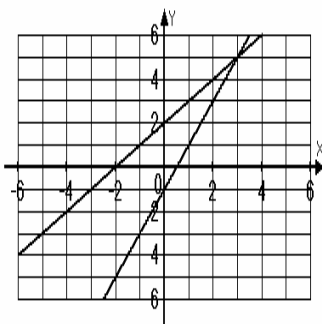


Additional Exercises Answers

5.1 Form I

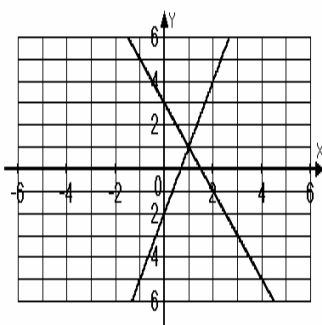
1. Yes 2. No 3. No

4.



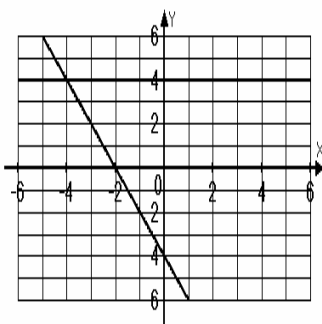
$\{(3, 5)\}$

6.



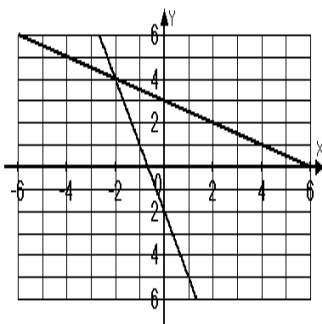
$\{(1, 1)\}$

8.



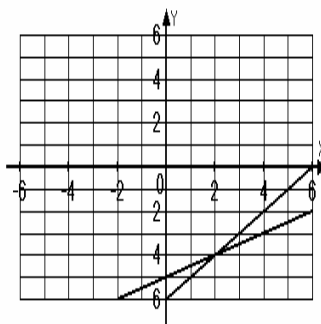
$\{(-4, 4)\}$

10.



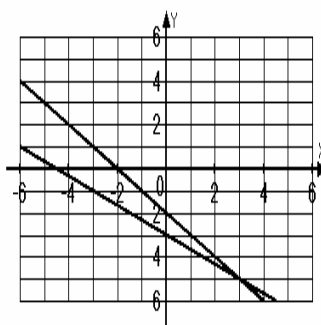
$\{(-2, 4)\}$

5.



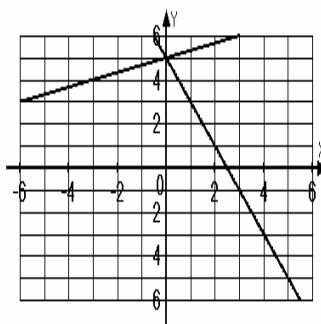
$\{(2, -4)\}$

7.



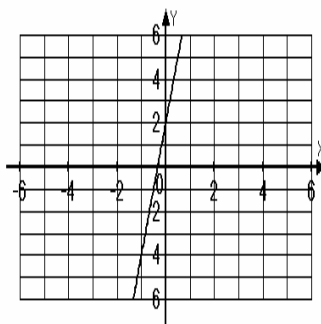
$\{(3, -5)\}$

9.



$\{(0, 5)\}$

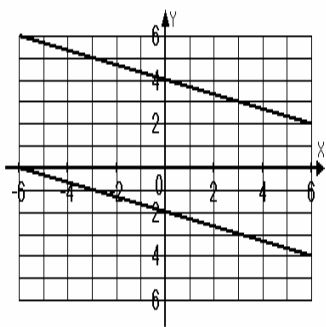
11.



Infinitely many solutions

$\{(x, y) \mid y - 6x = 2\} \quad \{(x, y) \mid 2y = 12x + 4\}$

12.

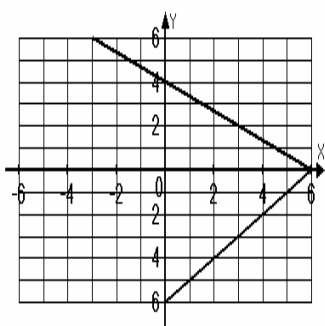


No Solution; \emptyset

5.1 Form II

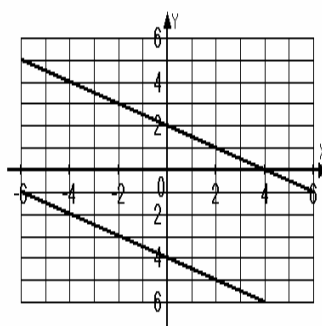
1. No 2. Yes 3. Yes

4.



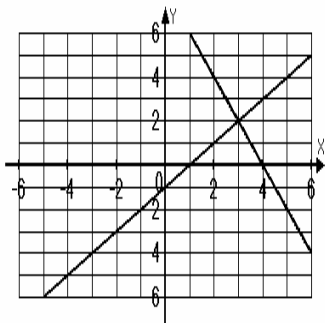
$\{(6, 0)\}$

5.



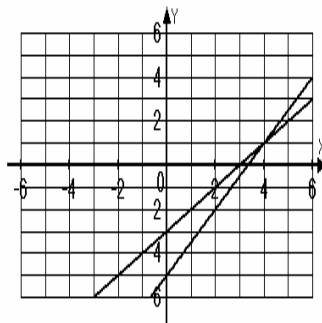
No Solution; \emptyset

6.



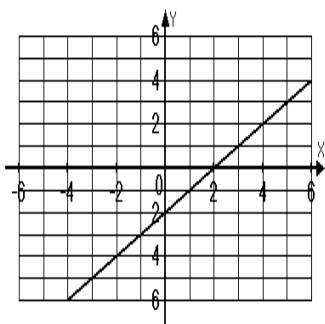
$\{(3, 2)\}$

7.



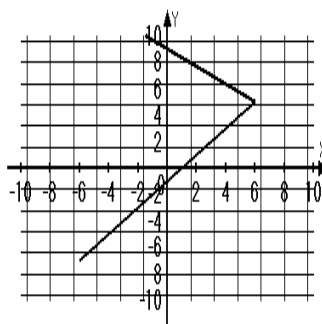
$\{(4, 1)\}$

8.



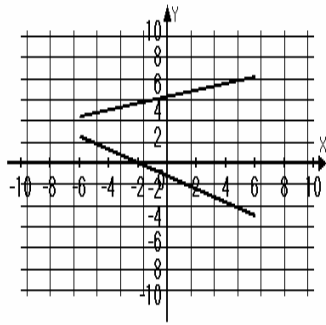
Infinitely many solutions
 $\{(x, y) \mid y = x - 2\}$

9.



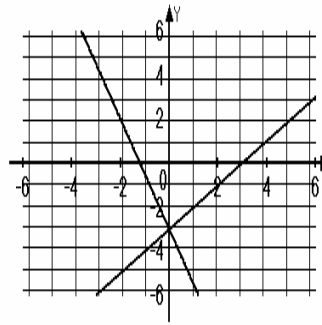
$\{(6, 5)\}$

10.



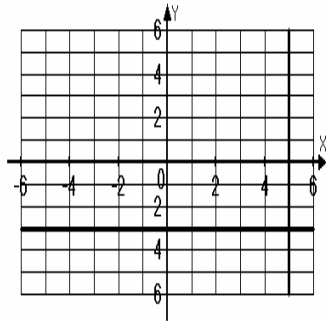
$\{(-4, 1)\}$

11.



$\{(0, -3)\}$

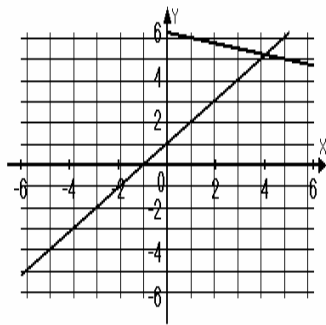
12.



$\{(5, -3)\}$

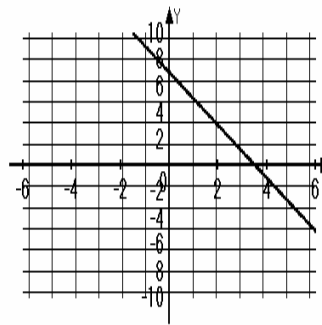
1. No 2. Yes 3. No

4.



$\{(4, 5)\}$

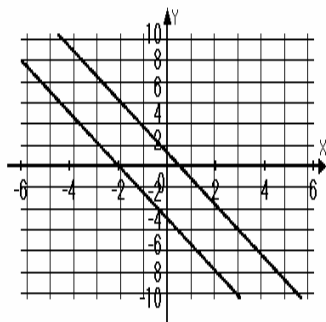
5.



Infinitely many solutions

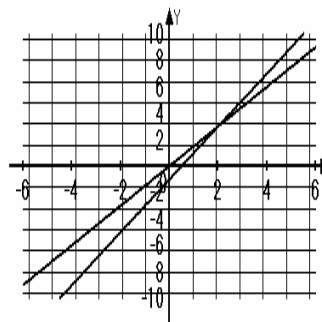
$$\{(x, y) \mid 2x + y = 7\} \quad \{(x, y) \mid 6x + 3y = 21\}$$

6.



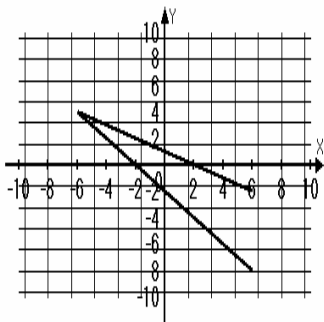
No Solution; \emptyset

7.

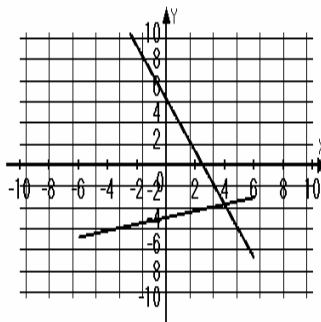


$\{(2, 3)\}$

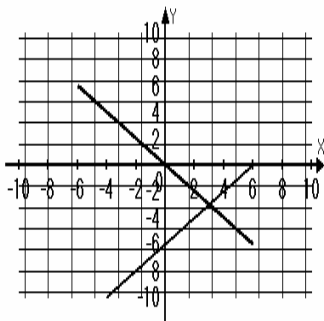
8.

 $\{(-6, 4)\}$

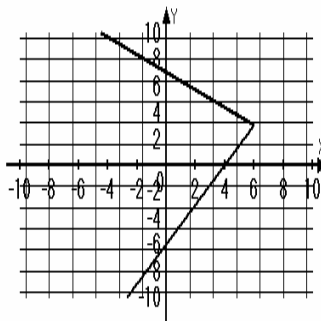
9.

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

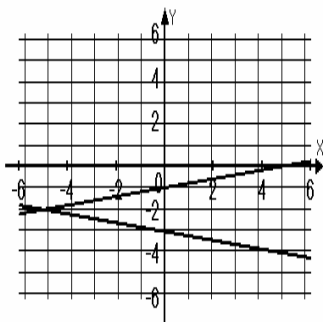
10.

 $\{(3, -3)\}$

11.

 $\{(6, 3)\}$

12.

 $\{(-5, -2)\}$ **5.2 Form I**

1. $\{(4, 7)\}$ 2. $\{(-3, -4)\}$ 3. $\{(1, -3)\}$ 4. $\{(10, 5)\}$ 5. Infinitely many solutions; $\{(x, y) \mid 3x + 3y = 12\}$ or $\{(x, y) \mid x = 4 - y\}$ 6. $\{(2, 4)\}$ 7. $\{(5, -6)\}$ 8. No Solution; \emptyset
 9. $\{(2, 0)\}$ 10. $\{(0, -7)\}$ 11. $\{(-4, 3)\}$ 12. $\{(5, -5)\}$ 13. $\{(-3, 5)\}$ 14. No Solution, \emptyset
 15. $\{(-2, 2)\}$ 16. $\{(-2, -1)\}$

5.2 Form II

1. $\{(7, -1)\}$ 2. $\{(4, 16)\}$ 3. Infinitely many solutions; $\{(x, y) \mid 6x - 2y = 14\}$ or $\{(x, y) \mid 3x - y = 7\}$ 4. $\{(8, 2)\}$ 5. $\{(-4, 12)\}$ 6. No Solution; \emptyset 7. $\{(1, 0)\}$ 8. $\{(5, 4)\}$
 9. $\{(5, -2)\}$ 10. $\left\{\left(\frac{1}{2}, 4\right)\right\}$ 11. $\left\{\left(\frac{4}{5}, -\frac{1}{5}\right)\right\}$ 12. $\left\{\left(1, \frac{1}{3}\right)\right\}$ 13. No Solution; \emptyset
 14. $\{(8, 6)\}$ 15. $\{(11, 15)\}$ 16. $\{(-9, 5)\}$

5.2 Form II

1. $\{(5, -3)\}$ 2. $\{(-2, -7)\}$ 3. $\{(-2, -1)\}$ 4. $\{(-5, 6)\}$ 5. Infinitely many solutions; $\{(x, y) \mid 2x + y = 14\}$ or $\{(x, y) \mid 4x + 2y = 28\}$ 6. $\{(-2, 2)\}$ 7. $\{(12, 10)\}$
8. No Solution; \emptyset 9. $\{(-4, 9)\}$ 10. $\left\{\left(\frac{1}{8}, -\frac{3}{8}\right)\right\}$ 11. $\left\{\left(\frac{2}{3}, -4\right)\right\}$ 12. $\{(5, 4)\}$
13. $\{(7, -7)\}$ 14. $\{(14, 12)\}$ 15. After 2 $\frac{1}{2}$ years, 869 thousand of Product A and 869 thousand of Product B would be sold. 16. The numbers are 7 and 8.

5.3 Form I

1. $\{(-4, 3)\}$ 2. $\{(4, 2)\}$ 3. $\{(5, -4)\}$ 4. No Solution; \emptyset 5. $\{(-5, -6)\}$ 6. $\{(1, 2)\}$
7. $\{(0, 2)\}$ 8. $\{(8, 3)\}$ 9. $\{(-2, -2)\}$ 10. $\{(6, 1)\}$ 11. $\{(-3, 10)\}$
12. Infinitely many solutions; $\{(x, y) \mid 4x - 6y = 10\}$ or $\{(x, y) \mid 6x - 9y = 15\}$ 13. $\left\{\left(\frac{1}{3}, -2\right)\right\}$
14. $\{(8, 14)\}$ 15. $\left\{\left(\frac{2}{5}, -\frac{3}{5}\right)\right\}$ 16. $\{(1, -3)\}$

5.3 Form II

1. $\{(4, 4)\}$ 2. $\{(-3, -2)\}$ 3. $\{(1, -6)\}$ 4. $\{(0, 4)\}$ 5. $\{(-2, -5)\}$
6. Infinitely many solutions; $\{(x, y) \mid 6x + 3y = 27\}$ or $\{(x, y) \mid 2x + y = 9\}$ 7. $\{(5, -12)\}$
8. $\left\{\left(\frac{1}{5}, 2\right)\right\}$ 9. $\left\{\left(\frac{1}{4}, -\frac{7}{4}\right)\right\}$ 10. No Solution; \emptyset 11. $\left\{\left(-\frac{1}{3}, -\frac{5}{4}\right)\right\}$ 12. $\{(-5, 3)\}$
13. $\{(-4, -7)\}$ 14. No Solution; \emptyset 15. $\{(1, 2)\}$ 16. $\{(20, -16)\}$

5.3 Form III

1. $\{(36, -9)\}$ 2. $\{(-7, -10)\}$ 3. No Solution; \emptyset 4. Infinitely many solutions; $\{(x, y) \mid 6x - 4y = -4\}$ or $\{(x, y) \mid 12x - 8y = -8\}$ 5. $\{(-1, 3)\}$ 6. $\{(13, 0)\}$ 7. No Solution; \emptyset
8. $\{(6, 4)\}$ 9. $\left\{\left(-\frac{2}{9}, \frac{14}{9}\right)\right\}$ 10. $\left\{\left(-\frac{4}{5}, \frac{3}{8}\right)\right\}$ 11. $\{(5, -1)\}$ 12. $\{(-4, -16)\}$
13. $\{(10, 4)\}$ 14. $\{(-15, -2)\}$ 15. $\{(3, 1)\}$ 16. $\{(-4, -1)\}$

5.4 Form I

1. 4 and 8 2. 24 and 28 3. 8 and 12 4. 30 and 126 5. Bath towels are \$7. Washcloths are \$4.
6. A shirt costs \$26. Pants cost \$32. 7. 50 bracelets and 30 necklaces 8. 35 geraniums and 45 daisies 9. The width is 7 inches. The length is 11 inches. 10. The width is 121 cm. The length is 363 cm. 11. 29° and 111° 12. The current is 3 mph.

5.4 Form II

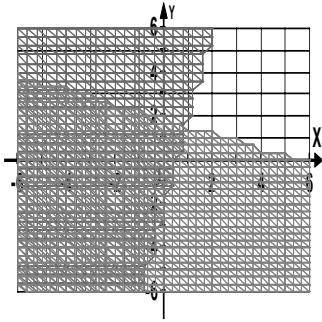
1. -4 and 8 2. 17 and 24 3. 14 and -6 4. 18 adult tickets and 15 children's tickets
5. 98 dimes; 14 nickels 6. 382 hardback books and 451 paperback books 7. 8° , 40° , and 132°
8. The width is 5 inches. The length is 16 inches 9. The width is 7 feet. The length is 40 feet.
10. Popcorn, \$1.50, Juice, \$1.25 11. 9 hours 12. 1 mph

5.4 Form III

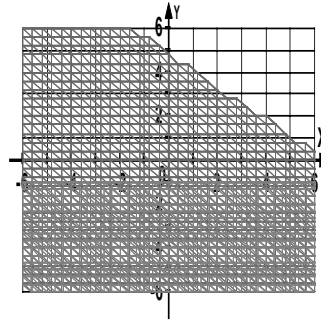
1. 22 and 70 2. 6 and -5 3. 12 and 15 4. Hot dogs, \$4.50; Sodas, \$3.00 5. 13 nickels, 52 quarters 6. 1272 adult tickets; 526 children's tickets 7. 47° and 90° 8. 40° , 40° and 100° 9. The width is 15.8 feet. The length is 24.2 feet. 10. Ken's rate is 5.6 mph. Hector's rate is 7 mph. 11. Still water speed is 6.25 mph. The current is 1.25 mph. 12. After driving 50 miles the plan would be equal. The cost would be \$33.00.

5.5 Form I

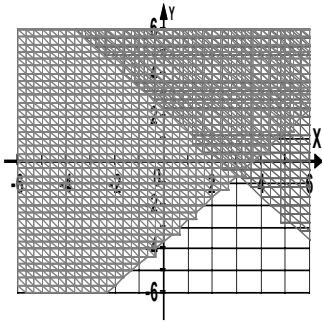
1.



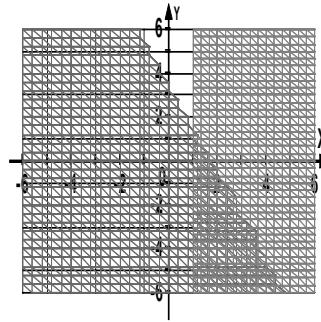
2.



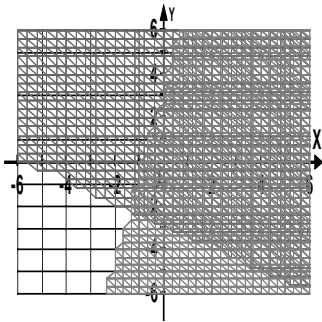
3.



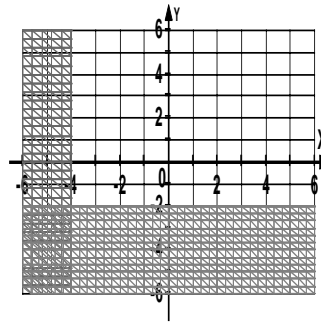
4.



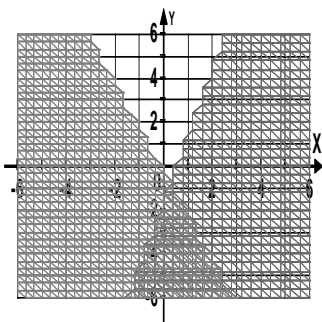
5.



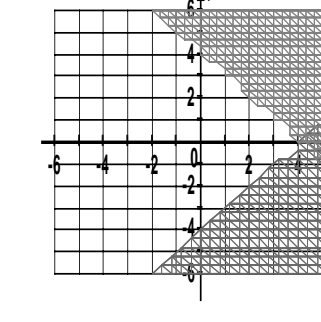
6.



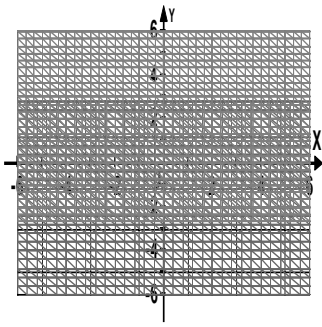
7.



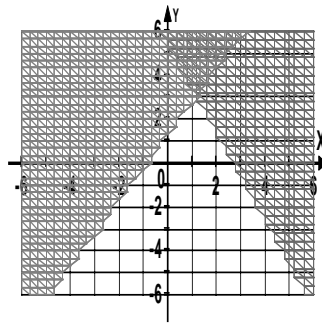
8.



9.

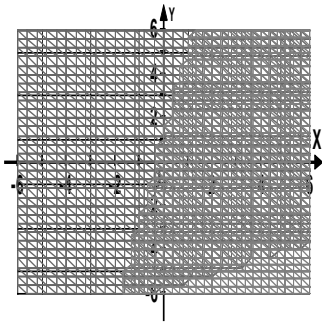


10.

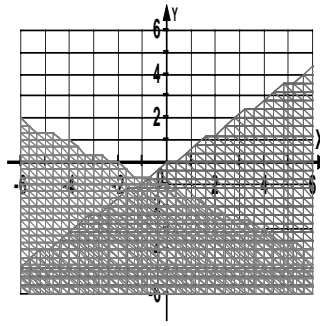


5.5 Form II

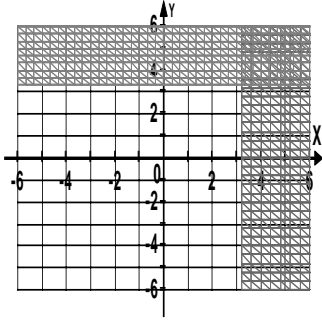
1.



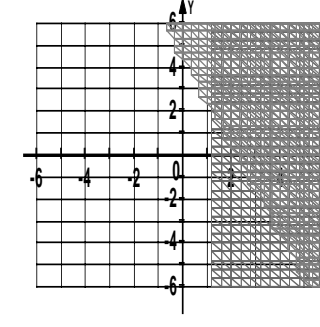
2.



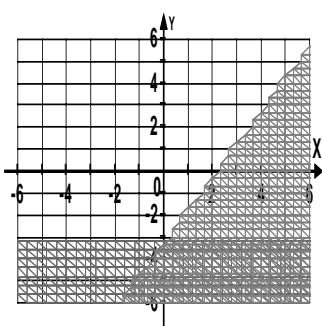
3.



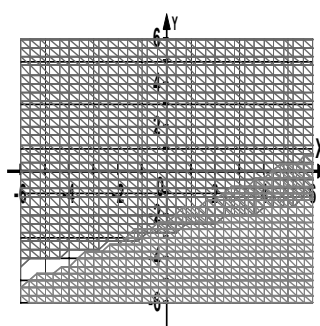
4.



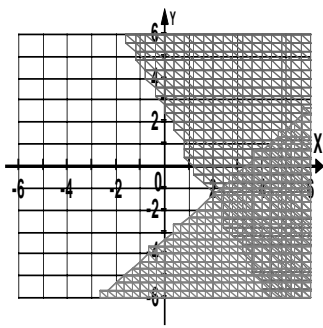
5.



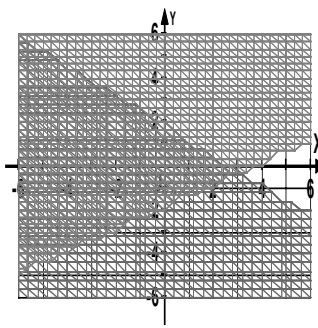
6.



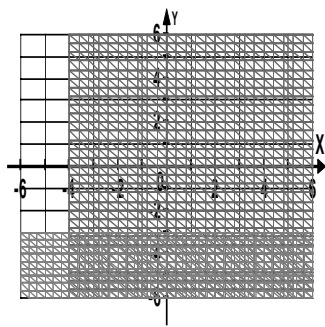
7.



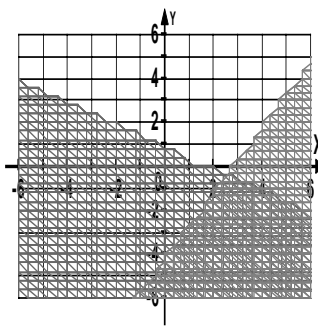
8.



9.

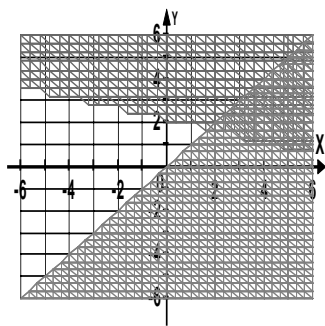


10.

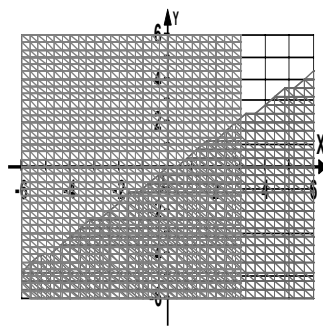


5.5 Form III

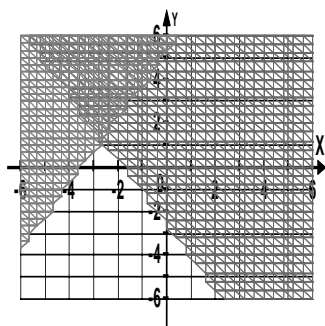
1.



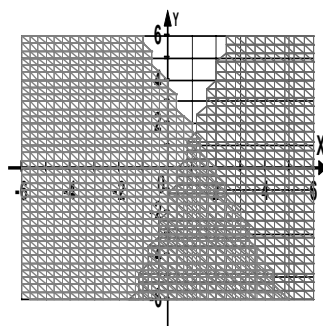
2.



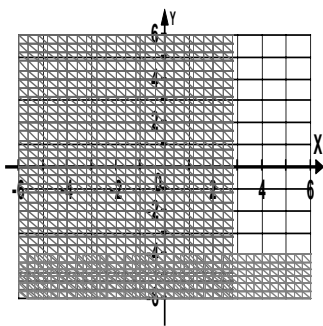
3.



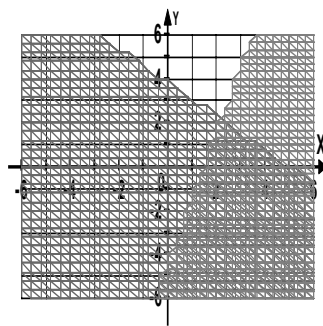
4.



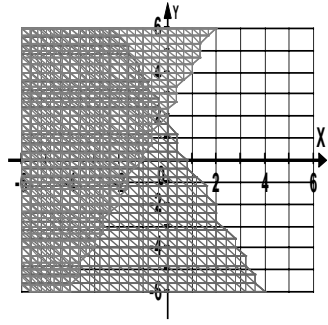
5.



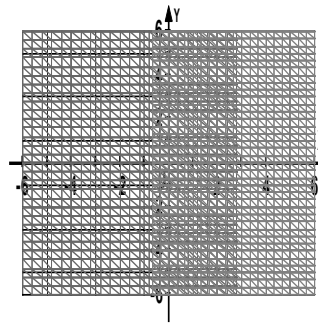
6.



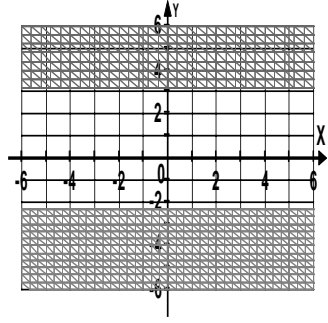
7.



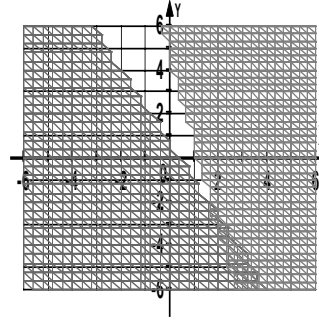
8.



9.



10.



No Solution

11. Yes 12. No