

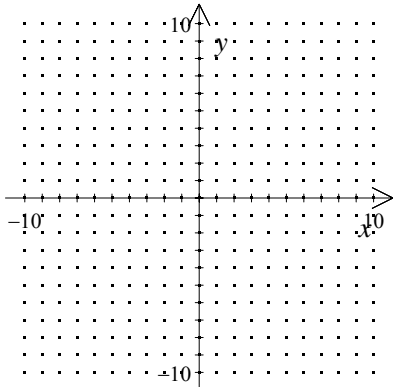
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P.I. A.G.7: Graph and solve systems of linear inequalities with rational coefficients in two variables

1. Graph the system of inequalities:

$$y \geq x + 3$$

$$2x + y \geq 6$$

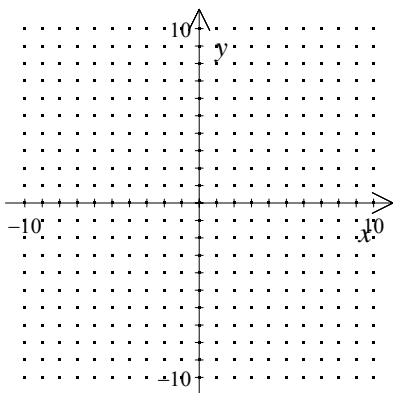


[1] _____

2. Graph the system of inequalities:

$$y \geq x + 7$$

$$2x + y \leq -5$$

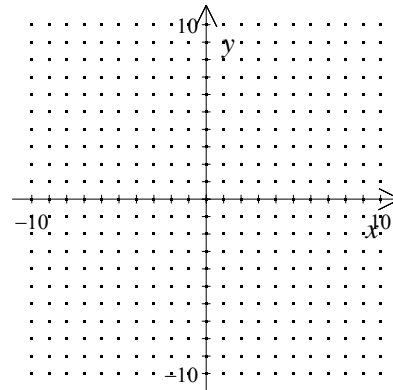


[2] _____

3. Graph the system of inequalities:

$$y \leq x - 4$$

$$3x + y \leq 4$$

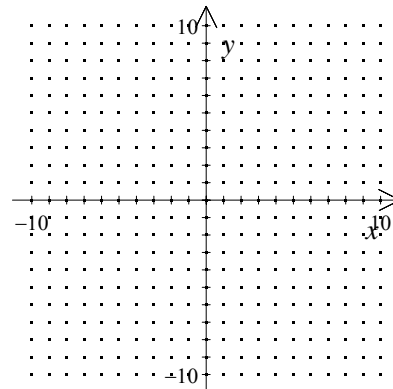


[3] _____

4. Graph the system of inequalities:

$$y \leq x - 2$$

$$2x + y \geq 1$$



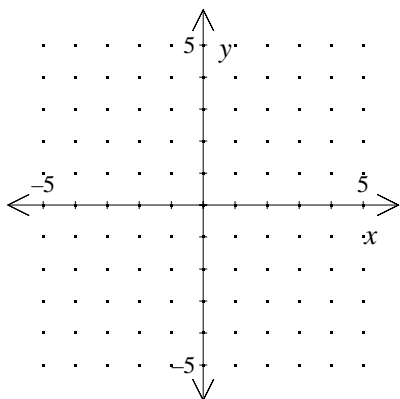
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5. Determine the solution to the system of inequalities:

$$2x + y \leq 3$$

$$x - 3y \geq -6$$

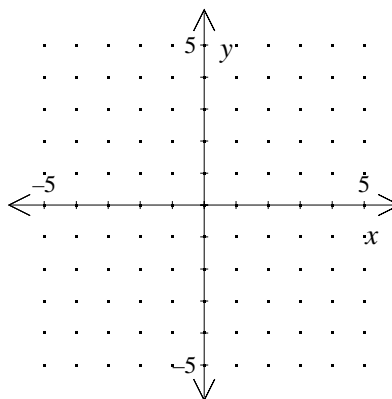


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7. Determine the solution to the system of inequalities:

$$x + y \leq 1$$

$$x - 2y \geq -6$$

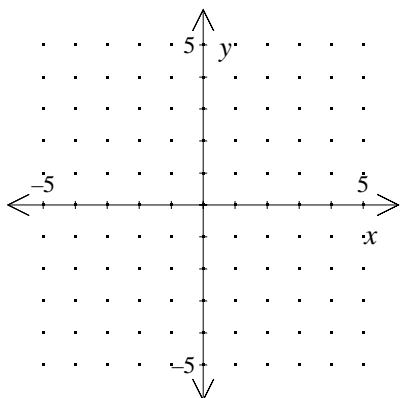


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6. Determine the solution to the system of inequalities:

$$3x + 3y \leq 3$$

$$x - 3y \geq -6$$



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8. Write a system of inequalities that will include these three points in the solution set: $(-2, 1)$, $(-3, 2)$, $(-3, 0)$.

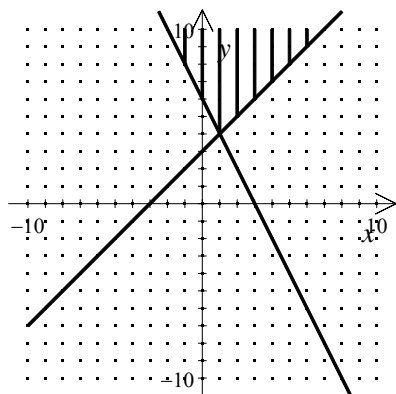
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9. Write a system of linear inequalities with solutions only in quadrants I and IV.

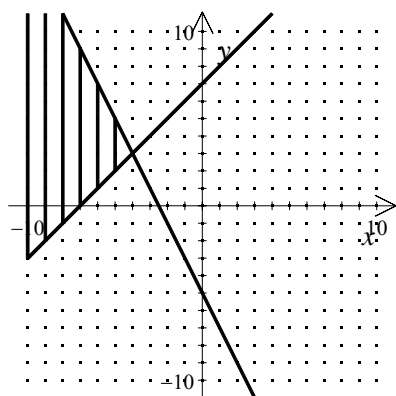
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10. Use any problem solving strategy to solve the following problem. The sum of two different positive integers is less than 55 and greater than 20. Write the integers with the greatest possible difference that meet these conditions.

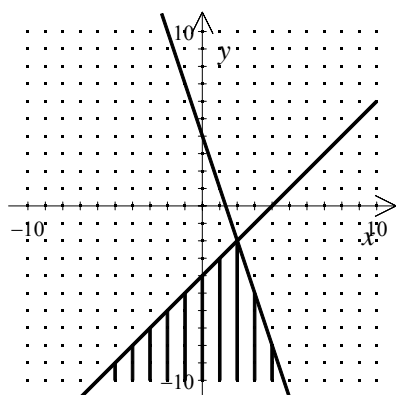
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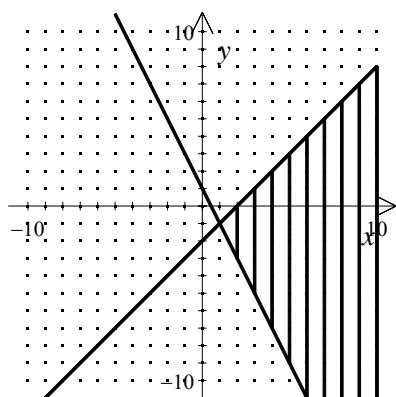
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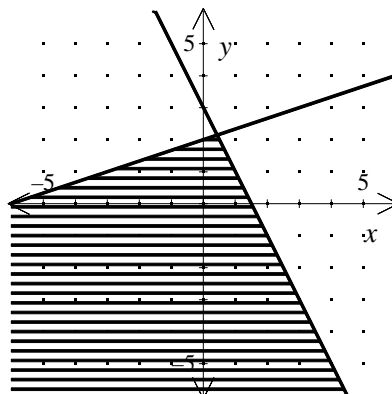
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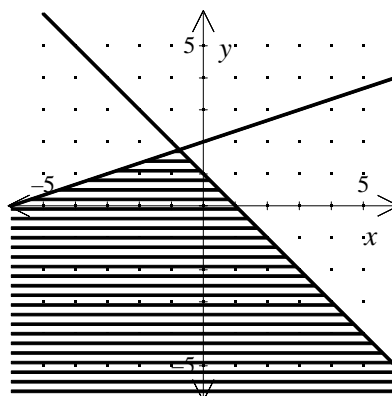
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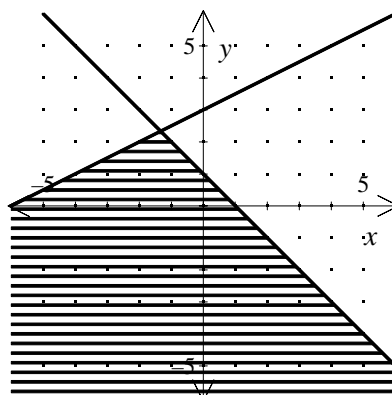
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[5]



[6]



[7]

Answers may vary. Sample: $y < -x$ and

[8] $y > x + 2$

Answers may vary. Sample:

$y > -x + 2$

[9] $y < x$

[10] 53 and 1