Name

Class

Date

Systems of Linear Inequalities

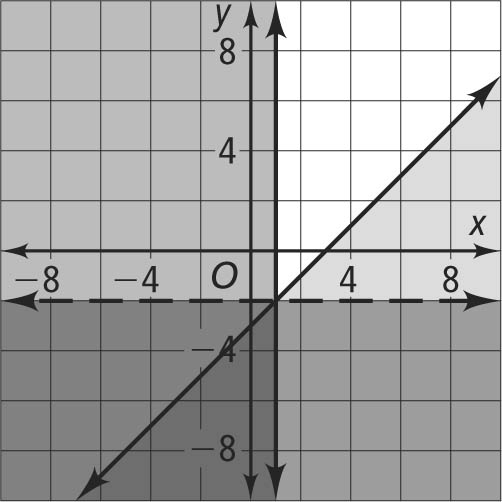
6-6

**Practice** *Form G*

**Solve each system of inequalities by graphing.**

|  |  |  |
| --- | --- | --- |
| **1.** 3*x +* *y* ≤ 1 | **2.** 5*x* − *y* ≤ 1 | **3.** 4*x +* 3*y* ≤ 1 |
| *x* − *y* ≤ 3 | *x +* 3*y* ≤ −2 | 2*x* − *y* ≤ 2 |

1. **Writing** What is the difference between the solution of a system of linear   
   inequalities and the solution of a system of linear equations? Explain.
2. **Open-Ended** When can you say that there is no solution for a system of   
   linear inequalities? Explain your answer and show with a system and graph.

**6. Error Analysis** A student graphs the system below. Describe and correct the student’s error.

*x* − *y* ≥ 3

*y* < −2

*x* ≥ 1

**Determine whether the ordered pair is a solution of the given system.**

|  |  |  |
| --- | --- | --- |
| **7.** (0, 1); | **8.** (–2, 3); | **9.** (1, 4); |
| 1 − *x* ≥ 3*y* | 2*x +* 3*y >* 2 | 2*x +* *y >* 3 |
| 3*y* − 1 > 2*x* | 3*x +* 5*y >* 1 | –3*x* − *y* ≤ 5 |

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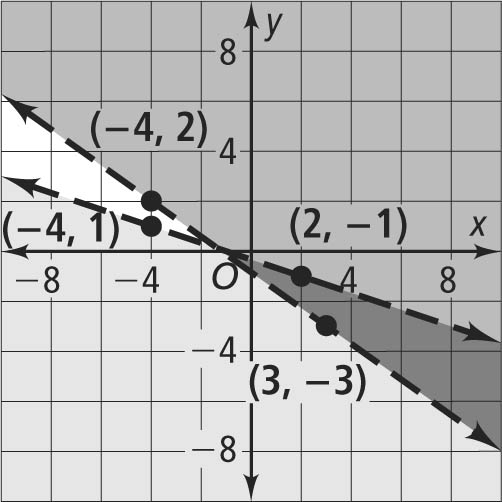
Date

6-6

Systems of Linear Inequalities

**Practice** (continued) *Form G*

1. Mark is a student, and he can work for at most 20 hours a week.   
   He needs to earn at least $75 to cover his weekly expenses. His   
   dog-walking job pays $5 per hour and his job as a car wash attendant pays $4 per hour. Write a system of inequalities to   
   model the situation, and graph the inequalities.
2. Britney wants to bake at most 10 loaves of bread for a bake sale. She wants to make banana bread that sells for $1.25 each and   
   nut bread that sells for $1.50 each and make at least $24 in sales. Write a system of inequalities for the given situation and graph   
   the inequalities.

**12.** Write a system of inequalities for the following graph.

**Solve each system of inequalities by graphing.**

|  |  |
| --- | --- |
| **13.** 5*x +* 7*y >* −6 | **14.** *x +* 4*y* − 2 ≥ 0 |
| *x +* 3*y <* −1 | 2*x* − *y +* 1 > 2 |

**15. **

3*x +* *y >* 2

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