Graphing Inequalities – Day 3   Name _____
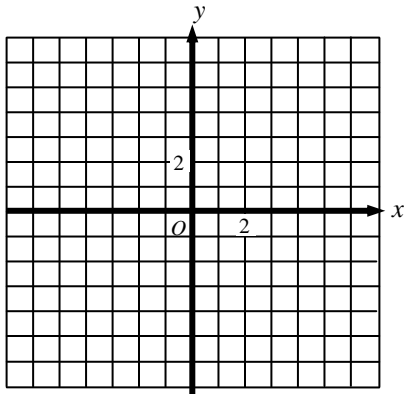Assignment   Date _____ Period _____

Graph the following inequalities and determine if the point given is in the solution.

1. $2x + y < -1$

       m = _____   b = _____
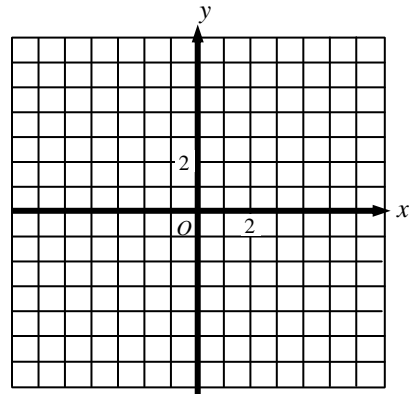
       line _____   shade _____

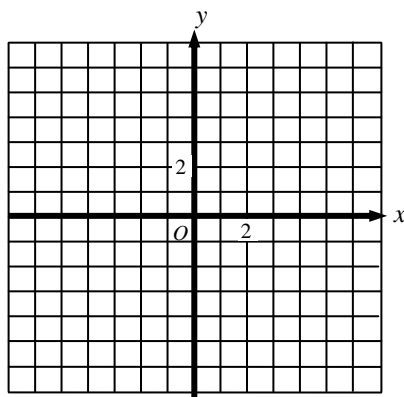
Is the point (2, 2) in the solution? _____

2. $15x + 5y > 10$

       m = _____   b = _____

       line _____   shade _____

Is the point (0, −4) in the solution? _____

3. $x - 2y \geq -8$

       m = _____   b = _____

       line _____   shade _____

Is the point (−3, 5) in the solution? _____

4. $3x + 4y < 20$

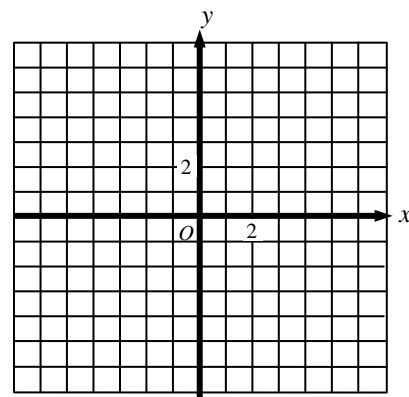   m = _____   b = _____
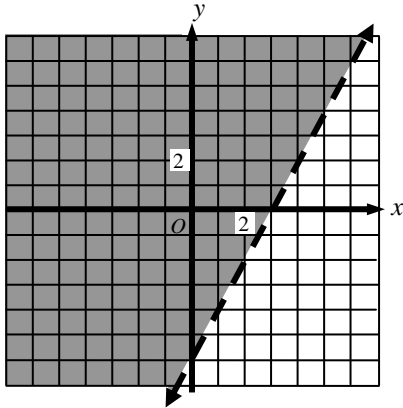
       line _____   shade _____

Is the point (1, −5) in the solution? _____

Write the inequality of each graph below. Then determine if the point given is in the solution.

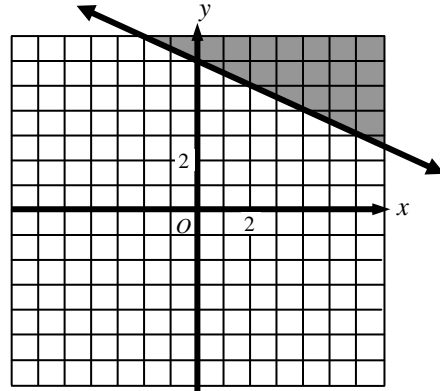5.   m = _____   b = _____

        line _____   shade _____

        Inequality _____

Is the point (4, 0) in the solution? _____

6.   m = _____   b = _____

        line _____   shade _____

        Inequality _____

Is the point (6, 4) in the solution? _____

7.   m = _____   b = _____

        line _____   shade _____

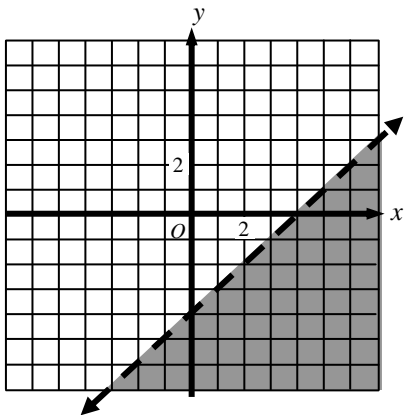   Inequality _____

Is the point (2, 5) in the solution? _____

8.   m = _____   b = _____
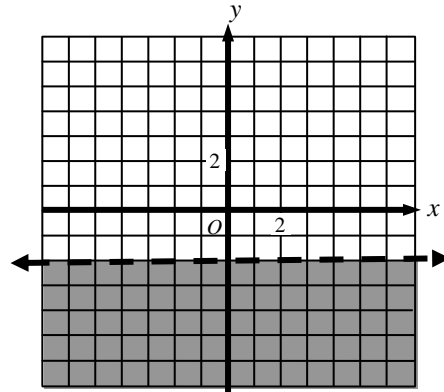
        line _____   shade _____

        Inequality _____

Is the point (−5, −2) in the solution? _____

Wealthy Walt is planning to take his family on a trip during the winter break. Walt worked at Wendy's during the summer and saved $400 from his earnings and put it into a savings account. Starting the first week of school, he added $25 to his savings every week. Walt has decided that he wants to take his family to Wally World and it will cost at least $880 to pay for the trip.

9.   Write an expression that represents the number of weeks, *w*, he has been saving.

    _____

10.   How much money has Walt saved after 12 weeks? Is it enough to take his family on the trip? Why or why not?

11.   What does the coordinate (5, 525) mean in relation to Walt's problem?

12.   Walt knows that he has 18 weeks to save before Winter Break begins. Will he have enough money to take his family on the Wally World trip? Why or why not?

Write an inequality to represent each scenario.

13.   Really weird Wanda collects bubble gum wrappers. She has 125 in her collection and decides to add 36 wrappers to her collection each week. Write an inequality to represent the amount of wrappers, w, Wanda has if she wants at least 378.

    _____

14.   Gigantic Gene weighs 350 pounds. He goes on a diet and loses 20 pounds each month. Write an inequality to represent the number of months, m, Gene will need to diet if he wants to weigh at most 220 pounds.

    _____

15.   Fisherman Fred began his fishing trip with 150 worms to use as bait. On average, Fred uses 18 worms an hour to catch fish. Write an inequality to represent the number of hours, h, Fred can fish if he wants to have fewer than 35 worms left at the end of the day.

    _____