Name_____ Date _____

2.1 Practice A

In Exercises 1–6, write the sentence as an inequality.

1. A number x is less than 2.

2. A number m plus 4 is greater than or equal to 7.

3. Ten is no less than a number q multiplied by 6.

4. Four times a number p is more than 22.

5. One-third of a number t is less than or equal to 5.

6. Six is more than the difference of a number d and 1.

7. There are 65 people in a restaurant. The restaurant has a maximum capacity of 84 people. Write an inequality that represents the number x of additional people who can enter the restaurant.

In Exercises 8–13, tell whether the value is a solution of the inequality.

8. $u + 7 < 4;\ u = 2$
9. $8 - x \geq 3;\ x = 2$

10. $5p \geq 24;\ p = 6$
11. $15 \leq 4w;\ w = 3$

12. $-3 > -\dfrac{x}{5};\ x = 10$
13. $\dfrac{8}{y} \leq 6;\ y = 2$

14. The largest alligator ever caught in Mississippi weighed 727 pounds.

   a. Write an inequality that represents the weights of every other alligator that has ever been caught in Mississippi.

   b. Is 750 pounds a solution to your inequality? Explain.

In Exercises 15–20, graph the inequality.

15. $x \geq 4$
16. $j < 3$
17. $m \leq -1$

18. $-3 < t$
19. $-5 \geq q$
20. $w < -4$

In Exercises 21–23, write and graph an inequality for the given solution set.

21. $\{x \mid x > 3\}$
22. $\{p \mid p \leq 0\}$
23. $\{w \mid w \geq -6\}$

24. To qualify for an award, a student volunteers no less than 5 hours each week at the local hospital. Write an inequality that represents how many hours the student volunteers each week.