Name _____ Class _____ Date _____

Practice 3-5

Equations to Inequalities

1. Which of these situations have exactly one solution?

1. To make some cookies, John needs 4 eggs.
2. Karen went to more than 5 baseball games last year.
3. Last year, a teacher gave one test for each of the 8 chapters in the textbook.
4. Some friends spent more than 3 hours playing their favorite board game.

a) Check all that apply.

- ❑ A. situation 4
- ❑ B. situation 3
- ❑ C. situation 1
- ❑ D. situation 2

b) Check all of the situations that have more than one solution.

- ❑ A. situation 2
- ❑ B. situation 4
- ❑ C. situation 3
- ❑ D. situation 1

2. Which situations can you represent with an equation?

1. Two friends live 7 blocks apart.
2. A girl earned $26 babysitting on Saturday night.
3. Each class must have fewer than 23 students.
4. The homework took 4 hours to complete.

a) Check all of the situations that apply.

- ❑ A. situation 1
- ❑ B. situation 2
- ❑ C. situation 3
- ❑ D. situation 4

b) Check all of the situations that you can represent with an inequality.

- ❑ A. situation 2
- ❑ B. situation 3
- ❑ C. situation 1
- ❑ D. situation 4

3. The restaurant can seat no more than 171 people. If p is the restaurant's capacity, which of the following inequalities models the given situation?

- ❍ A. $p \leq 171$
- ❍ B. $p > 171$
- ❍ C. $p \geq 171$
- ❍ D. $p < 171$

4. Which of these situations can you represent with the inequality $x \geq 45$?

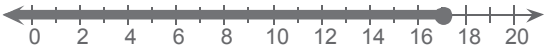
1. You must be at least 45 inches tall to go on this ride.
2. A loaf of bread must be baked for no more than 45 minutes.
3. You have at least 45 minutes left on a parking meter.
4. The bill at a restaurant was no more than $45.

Check all of the situations that you can represent with the inequality $x \geq 45$.

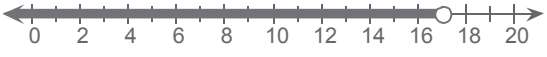
- ❑ A. situation 4
- ❑ B. situation 1
- ❑ C. situation 3
- ❑ D. situation 2

5. Two cities are less than 17 miles apart. Choose the correct graph that models the situation.

❍ A. 

❍ B. 

❍ C. 

❍ D. 

6. Which inequality has this graph?

❍ A. $x \leq 5$

❍ B. $x < 5$

❍ C. $x \geq 5$

❍ D. $x > 5$

❍ E. $x \neq 5$

7. a) Multiple Representations For the following situation, decide if there is exactly one or more than one solution. Make one or more drawings to support your answer. A glass holds 9 ounces of juice. A boy overfills the glass and spills some juice. How much juice could he spill?

b) How many solutions are there?

❍ A. exactly one

❍ B. more than one

8. Writing Simon has fewer than 8 photographs in an art show. Decide if you can represent this situation with an equation or inequality. Explain your answer.

9. a) Open-Ended Describe a situation that you could represent with the inequality $x > 17$.

b) Is 22 a solution of your situation?

❍ A. Yes

❍ B. No

10. a) Reasoning Graph the inequalities $x > 2$ and $x < 2$.

b) Are the graphs the same?

❍ A. No

❍ B. Yes

*Practice 3-5: **Equations to Inequalities***

1. **a)** B, C
   b) A, B
2. **a)** A, B, D
   b) B
3. A
4. B, C
5. D
6. A
7. **a)** Answers will vary
   b) B
8. inequality, explanations will vary
9. **a)** Answers will vary
   b) A
10. **a)** Answers will vary
    b) A
11. A
12. B
13. D
14. an open circle
15. D