Unit 4: Inequalities

Name: _____   **Date:** _____

1. The inequality $3x + 2 > x + 8$ is equivalent to

   A. $x > -\frac{3}{2}$ B. $x > \frac{3}{2}$

   C. $x > 3$ D. $x < 3$

2. The smallest whole number that satisfies the inequality $3x - 1 > 2$ is

   A. 1   B. 2   C. 3   D. 0

3. Which inequality is the solution of $5x - 1 < 29$?

   A. $x > 7$ B. $x < 7\frac{1}{4}$

   C. $x < 6$ D. $x > 5\frac{3}{5}$

4. The inequality $2x > x + 7$ is equivalent to

   A. $x > 7$ B. $x < 7$ C. $x = 7$ D. $x > \frac{7}{3}$

5. What is the *greatest* whole number that satisfies the inequality $3x - 1 < 8$?

6. Which is the *smallest* integer that makes the inequality $2x + 3 > 5$ true?

   A. 1   B. 2   C. 5   D. −4

7. Which number is not a member of the solution set of $5x \leq 23$?

   A. 0   B. −4.7   C. 4.6   D. 4.7

8. Which inequality is equivalent to $2x + 6 > 2$?

   A. $x > -2$ B. $x < -2$

   C. $x > 2$ D. $x < 2$

9. Which is the greatest integer that makes the inequality $3 - 2x > 9$ a true statement?

   A. −2   B. 2   C. 5   D. −4

10. One member of the solution set of $3x - 1 \geq 4$ is

    A. 1   B. $\frac{2}{3}$ C. $\frac{5}{3}$ D. $-\frac{4}{3}$

11. The expression $5 \leq x - 2$ is equivalent to

    A. $x \leq 7$ B. $x \geq 7$ C. $x \geq 3$ D. $x \geq \frac{5}{2}$

12. Which element is in the solution set for the inequality $5x - 2 < 8$?

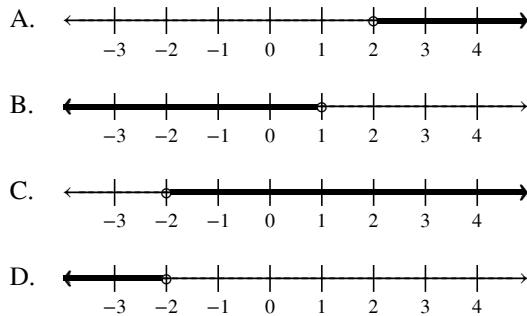   A. 0   B. 2   C. 3   D. 5

page 1

13. Which number is *not* a member of the solution set of the inequality $4x \geq 18$?

    A. 4.4   B. 4.5   C. 4.6   D. 4.7

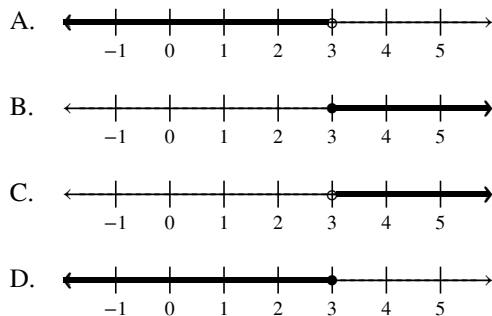14. A member of the solution set of $-1 \leq x < 4$ is
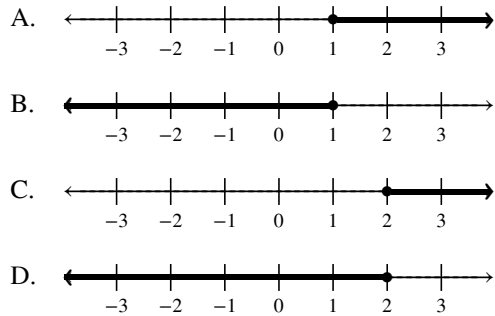
    A. -1 B. -2 C. 5   D. 4

15. Which graph represents the solution set of the inequality $4x > -8$?

    A.

    B.

    C.

    D.

16. Which graph represent the solution of the inequality $2x + 3 > 9$?

    A.

    B.

    C.

    D.

17. Which graph represents the solution set of $2x + 1 \geq 3$?

    A.

    B.

    C.

    D.

18. Which inequality is represented by the graph?
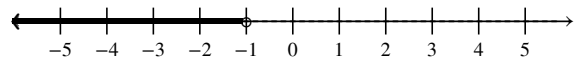
    A. $x > -1$ B. $x \leq -1$

    C. $x < -1$ D. $x \geq -1$

19. Which graph represents the solution set of the inequality $2x - 5 > 7$?

    A.

    B.

    C.

    D.
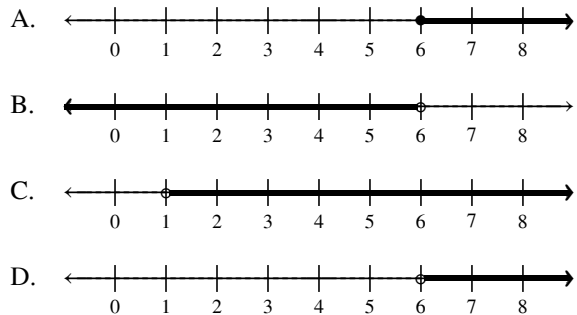
20. Which graph represents the solution of the inequality $-3x + 1 \leq 10$?

    A.

    B.

    C.

    D.
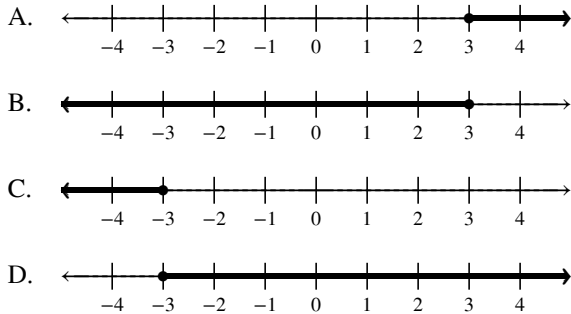
21. Which inequality is represented by the graph?
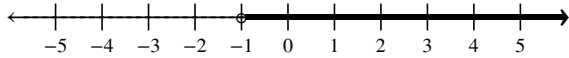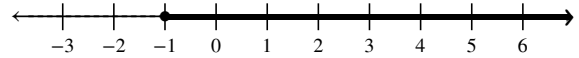

    A. $x > -1$ B. $x < -1$

    C. $x \geq -1$ D. $x \leq -1$

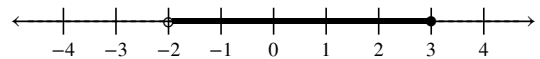22. Which graph best represents the solution set for the inequality $x > \sqrt{2}$?

    A.

    B.

    C.

    D.
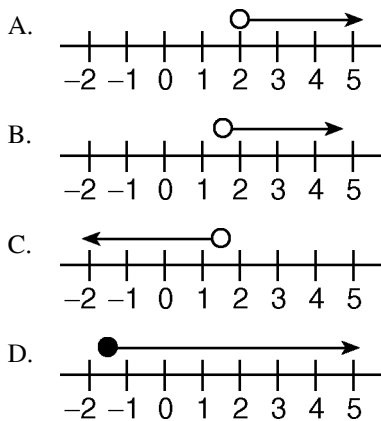
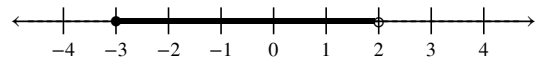23. Which inequality is shown on the accompanying graph?

    A. $x < -1$ B. $x \leq -1$

    C. $x > -1$ D. $x \geq -1$

24. Which inequality is represented by the accompanying graph?

    A. $-2 < x \leq 3$ B. $-2 \leq x \leq 3$

    C. $-2 \leq x < 3$ D. $-2 < x < 3$

25. Which open sentence is represented by the graph?

    A. $-3 < x < 2$ B. $-3 \leq x < 2$

    C. $-3 \leq x \leq 2$ D. $-3 < x \leq 2$

26. Which inequality is represented by the graph?
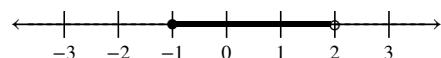
    A. $-1 < x < 2$ B. $-1 \leq x < 2$
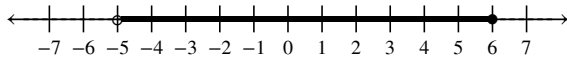
    C. $-1 < x \leq 2$ D. $-1 \leq x \leq 2$

page 3

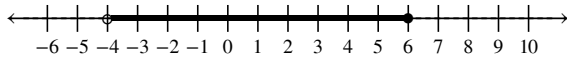27. Which inequality is represented by the accompanying graph?
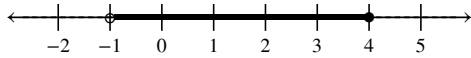
A. $-1 \leq x \leq 4$ B. $-1 < x < 4$

C. $-1 < x \leq 4$ D. $-1 \leq x < 4$

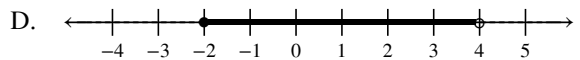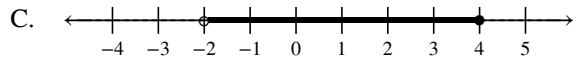28. Which inequality is represented by the graph?

A. $-5 < x < 6$ B. $-5 \leq x \leq 6$
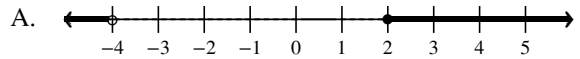
C. $-5 \leq x < 6$ D. $-5 < x \leq 6$
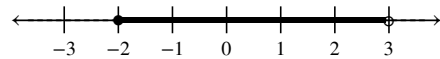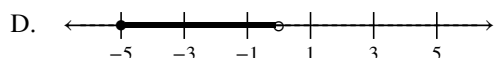
29. Which inequality is represented by the graph?

A. $-4 \leq x \leq 6$ B. $-4 < x < 6$

C. $-4 \leq x < 6$ D. $-4 < x \leq 6$
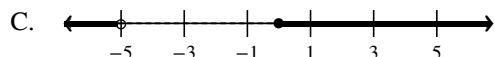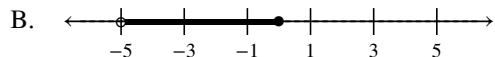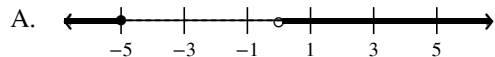
30. Which graph shows the solution set of $-2 \leq x < 4$?

A.

B.

C.

D.
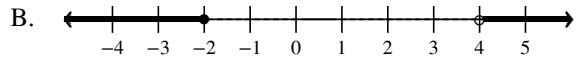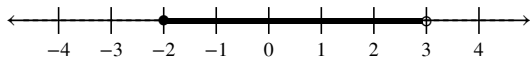
31. Which inequality is represented by the accompanying graph?

A. $-2 \leq x < 3$ B. $-2 \leq x \leq 3$

C. $2 < x < 3$ D. $-2 < x \leq 3$

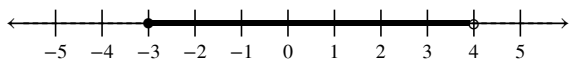32. Which graph represents the open sentence $-5 \leq x < 0$?

A.

B.

C.

D.

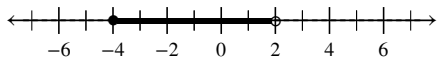33. Which inequality is represented in the graph?

    A. $-2 < x < 3$ B. $-2 \leq x < 3$

    C. $-2 \leq x \leq 3$ D. $-2 < x \leq 3$

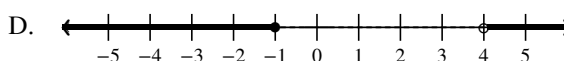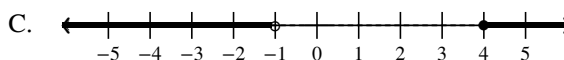34. Which inequality is represented by the graph?
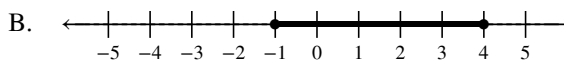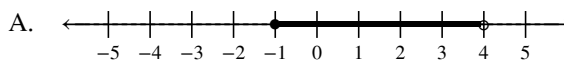

    A. $-3 < x \leq 4$ B. $-3 < x < 4$

    C. $-3 \leq x \leq 4$ D. $-3 \leq x < 4$

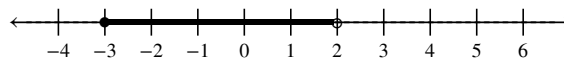35. Which inequality is represented in the accompanying graph?

    A. $-4 \leq x \leq 2$ B. $-4 < x < 2$

    C. $-4 < x \leq 2$ D. $-4 \leq x < 2$
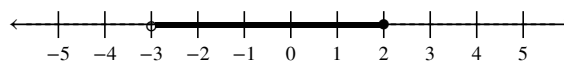
36. Which graph represents the inequality $-1 \leq x < 4$?

    A.

    B.

    C.

    D.

37. Which expression is represented in the graph shown?

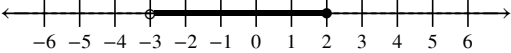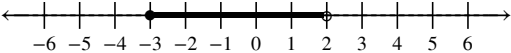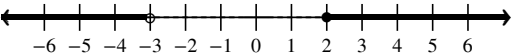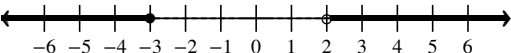   A. $-3 \leq x \leq 2$ B. $-3 \leq x < 2$

    C. $-3 < x \leq 2$ D. $-3 < x < 2$

38. Which inequality is represented by the graph?
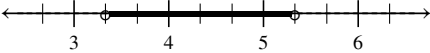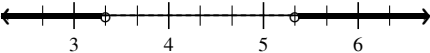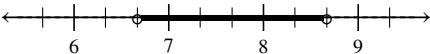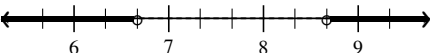

    A. $-3 < x < 2$ B. $-3 \leq x < 2$

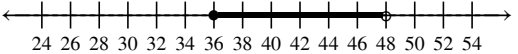   C. $-3 < x \leq 2$ D. $-3 \leq x \leq 2$
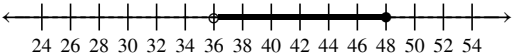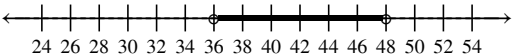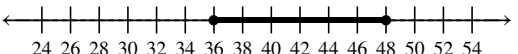
39. Which graph represents the inequality $-3 < x \le 2$?

    A.

    B.

    C.

    D.

41. In order to be admitted for a certain ride at an amusement park, a child must be greater than or equal to 36 inches tall and less than 48 inches tall. Which graph represents these conditions?

    A.

    B.

    C.

    D.

40. What is the graph of the solution set of $15 < 3x + 5 < 21$?

    A.

    B.

    C.

    D.

Unit 4: Inequalities   01/22/2013

1. Answer:	C		21. Answer:	A
2. Answer:	B		22. Answer:	B
3. Answer:	C		23. Answer:	D
4. Answer:	A		24. Answer:	A
5. Answer:	2		25. Answer:	B
6. Answer:	B		26. Answer:	B
7. Answer:	D		27. Answer:	C
8. Answer:	A		28. Answer:	D
9. Answer:	D		29. Answer:	D
10. Answer:	C		30. Answer:	D
11. Answer:	B		31. Answer:	A
12. Answer:	A		32. Answer:	D
13. Answer:	A		33. Answer:	B
14. Answer:	A		34. Answer:	D
15. Answer:	C		35. Answer:	D
16. Answer:	C		36. Answer:	A
17. Answer:	A		37. Answer:	B
18. Answer:	C		38. Answer:	C
19. Answer:	D		39. Answer:	A
20. Answer:	D		40. Answer:	A
			41. Answer:	A