

Section 1.2 The Real Number Line

1. If $x \in [-3, \infty)$, then

- (a) $x > -3$
- (b) $x \geq -3$
- (c) $x < -3$
- (d) $x \leq -3$

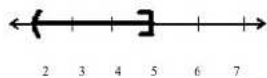
2. If x is positive, then

- (a) $x > 0$
- (b) $x \geq 0$
- (c) $x < 0$
- (d) $x \leq 0$

3. If $x \in (-2, 1]$, then

- (a) $-2 \leq x < 1$
- (b) $-2 < x \leq 1$
- (c) $-2 > x \geq 1$
- (d) $-2 < x \geq 1$

4. Which inequality corresponds to this graph?



- (a) $2 \leq x \leq 5$
- (b) $2 < x \leq 5$
- (c) $2 \leq x < 5$
- (d) $2 < x < 5$

5. Translate: x is greater than -15 and at most 13 .
- (a) $-15 > x \geq 13$
 - (b) $-15 \leq x \leq 13$
 - (c) $-15 < x < 13$
 - (d) $-15 < x \leq 13$
6. If $-2 < x \geq 3$, then
- (a) $x \in (-2, 3]$
 - (b) $x \in (-\infty, -2) \cup [3, \infty)$
 - (c) $x \in [-2, 3)$
 - (d) this is not possible
7. **Sense or Nonsense:** $-4 > x < 1$
- (a) I am confident that this makes sense.
 - (b) I think this makes sense, but I am not certain.
 - (c) I think this is nonsense, but I am not certain.
 - (d) I am confident that this is nonsense.
8. **Sense or Nonsense:** $0 \geq x \geq 2$
- (a) I am confident that this makes sense.
 - (b) I think this makes sense, but I am not certain.
 - (c) I think this is nonsense, but I am not certain.
 - (d) I am confident that this is nonsense.
9. **Sense or Nonsense:** $-4 < x \leq 1$
- (a) I am confident that this makes sense.
 - (b) I think this makes sense, but I am not certain.
 - (c) I think this is nonsense, but I am not certain.
 - (d) I am confident that this is nonsense.
10. If $-4 > x \geq 3$, then

- (a) $x \in (-4, 3]$
- (b) $x \in (-\infty, -4) \cup [3, \infty)$
- (c) $x \in [-4, 3)$
- (d) this is not possible

11. **Sense or Nonsense:** $[-8, 2]$

- (a) I am confident that this makes sense.
- (b) I think this makes sense, but I am not certain.
- (c) I think this is nonsense, but I am not certain.
- (d) I am confident that this is nonsense.

12. **Sense or Nonsense:** $(-\infty, 2]$

- (a) I am confident that this makes sense.
- (b) I think this makes sense, but I am not certain.
- (c) I think this is nonsense, but I am not certain.
- (d) I am confident that this is nonsense.

13. **Sense or Nonsense:** $(\infty, 10]$

- (a) I am confident that this makes sense.
- (b) I think this makes sense, but I am not certain.
- (c) I think this is nonsense, but I am not certain.
- (d) I am confident that this is nonsense.