

## Comparing Numbers

BI 1

**Instructions:** Compare these numbers. Write the greater than sign (>), less than sign (<) or equal to sign (=) in the circle provided to make a true statement.

1 9 < 10

2 3 > 1

3 5 < 8

4 19 < 20

5 5 = 5.0

6 11 > 1

7 3 < 3.5

8 1.5 > 1.0

9 0 = 0

10 30 > 28

11 100 < 101

12 40 < 50

13 10 = 10.0

14 99 > 98

15 16 < 19

16 4.4 < 4.7

17 12.5 > 12.0

18 19 > 1.9

## Graphing Basic Inequalities

BI 2

**Instructions:** Graph each inequality on the number line provided.

**1**  $n < 7$



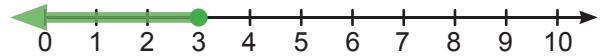
**2**  $n > 5$



**3**  $n \geq 2$



**4**  $n \leq 3$



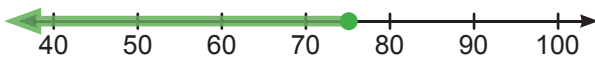
**5**  $n > 40$



**6**  $n \leq 40$



**7**  $n \leq 75$



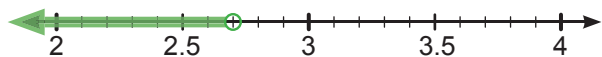
**8**  $n > 15$



**9**  $n \geq 65$



**10**  $n < 2.7$

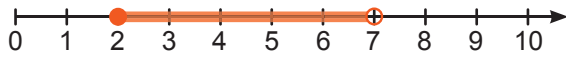


## Graphing Compound Inequalities

BI 3

**Instructions:** Graph each compound inequality on the number line provided.

**1**  $2 \leq n < 7$



**2**  $5 < n < 10$



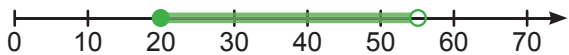
**3**  $4 \leq n \leq 6$



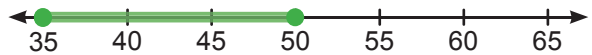
**4**  $0 < n \leq 60$



**5**  $20 \leq n < 55$



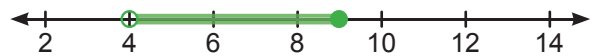
**6**  $35 \leq n \leq 50$



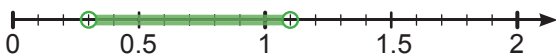
**7**  $15 < n < 30$



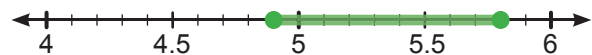
**8**  $4 < n \leq 9$



**9**  $0.3 < n < 1.1$



**10**  $4.9 \leq n \leq 5.8$

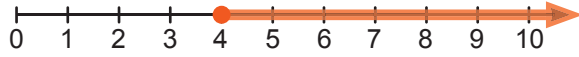


## Identifying Inequalities

BI 4

**Instructions:** Write the inequality that is graphed on each number line.

1  $N \geq 4$



2  $N < 5$



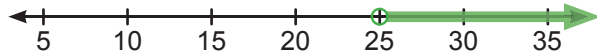
3  $N \leq 8$



4  $N \geq 20$



5  $N > 25$

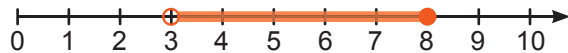


6  $N < 4.4$

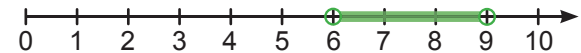


**Instructions:** Write the compound inequality that is graphed on each number line.

1  $3 < N \leq 8$



2  $6 < N < 9$



3  $0 \leq N < 40$



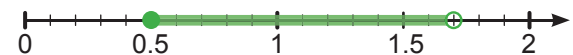
4  $45 \leq N \leq 55$



5  $10 < N \leq 25$



6  $0.5 \leq N < 1.7$



## Everyday Inequalities

BI 5

**Instructions:** Write an inequality that represents the scenario in each word problem. You can use any letter (or short word) for the inequality. Pay close attention to the words used in the problem since they will give you clues about which inequality symbol to use. (i.e. If something must be “at least 10”, that means 10 would still be included in the valid range. But if something must be “more than 10”, that means 10 would not be included.)

- 1 A student needs to have a grade point average (GPA) that is at least 2.0 to play on the school's sports teams.

$$GPA \geq 2.0$$

- 2 An athlete needs to jump at least 16 feet in order to qualify for the State long jump competition.

$$L \geq 16 \text{ ft}$$

- 3 A suitcase must weigh less than 20 kilograms to be allowed in the passenger compartment of the airplane.

$$W < 20 \text{ kg}$$

- 4 In order to make a reservation at a fancy restaurant, you must have a party that is larger than 6 people.

$$P > 6$$

- 5 A bicycle shop needs to sell at least 14 bikes a week in order to stay in business.

$$\text{Bikes} \geq 14$$

- 6 You are renting a bus for a field trip. The bus company says you must have at least 12 people to get a bus and a maximum of 40 people since that's all the bus can hold.

$$12 \leq P \leq 40$$

- 7 To participate in a local youth chess tournament, you need to be older than 7 but younger than 18.

$$7 < \text{Age} < 18$$

- 8 An employee calculates that they need to earn a minimum of \$2,500 per month in order to pay all their bills.

$$M \geq \$2,500$$

- 9 To fit through the doorway, your couch need to be no more than 30 inches wide.

$$W \leq 30 \text{ in}$$

- 10 A chemical in a laboratory must be stored in an environment that is at least 4 degrees Celsius but can't be more than 25 degrees Celsius.

$$4 \leq T \leq 25$$