

## Inequalities and Interval Notations

### Objectives:

- Translating to inequalities
- Expressing inequalities in interval notations

### Exercises:

1. Translate to an inequality.
  - a. Charles is at least 18 years old.
  - b. Las Vegas is no more than 300 miles.
  - c. The movie is between 60 and 150 minutes.
  - d. John scored more than 75 points on the exam.
  - e. Angela has at least \$75.
2. What is the difference between at most and less than?
3. Write one number that makes the compound inequality true.
  - a.  $3 < \square < 6$
  - b.  $5 \leq \square < 6$
  - c.  $2.14 < \square < 2.15$
  - d.  $-2 \leq \square \leq -2$
  - e.  $-2.5 < \square < -2$
  - f.  $0.234 < \square \leq 0.25$
4. Fill in the missing information with an equivalent expression

|    | English phrase  | Inequality  | Interval Notation | Number Line |
|----|---|-------------|-------------------|-------------|
| a. | To get a C, you must receive at least 70% but less than 80% |             |                   |             |
| b. |   | $14 \leq x$ |                   |             |
| c. |   |             | $(55, 95)$        |             |
| d. |   |             | $[-2, 2]$         |             |