

## Questions

### Module 1.0: Softball vs. Baseball

1. Which of the following would NOT support the function of Softball?
  - a. Size/shape
  - b. Materials
  - c. Color
  - d. Texture
2. True or False: The Venn diagram is a good tool to compare and contrast a softball and baseball's properties.
3. To best understand the function of softball, baseball, golf ball and tennis ball, which is most important:
  - a. Internal properties
  - b. Close observation
  - c. Physical properties
  - d. Each of the above

### Module 2.0: The Field of Play

1. Which of the following is a key difference between the materials and surfaces of the original baseball field versus today's fields (hint: there is more than one answer)?
  - a. In the original field, the playing field/surface was all grass.
  - b. In the original field, the outline was spray painted.
  - c. In the modern field, the pitching mound is flat.
  - d. In the modern field, the grass is synthetic (fake)
2. List three similarities between the materials and surfaces of the original baseball field to the field used today.
3. **Little League: Scaled Baseball Field**  
If the scale of the field diagram is 1 inch = 30 feet, what is the distance between first and second base?
  - a. 2 inches
  - b. 30 feet
  - c. 60 inches
  - d. 60 feet



### Module 3.0: Is it a Ball or Strike?

1. Which of the following is NOT an example of Energy and Speed.
  - a. A ball rolling
  - b. A car changing speeds
  - c. A pitcher changing speeds
  - d. A player catching the ball
  
2. Which of the following is correct (< >)?
  - a. 40% Strikes > 60% Balls
  - b. 47 mph > 53 mph
  - c. 84 mph < 78 mph
  - d. 68% Strikes > 32% Balls

### Module 4.0: Advancements in Baseball

1. True or False: Technology, such as instant replay, has had only a positive impact on the game of baseball.
  
2. Which of the following is part of the Engineering Design Process?
  - a. Criteria and Constraints
  - b. Brainstorming
  - c. Improvements
  - d. Asking questions
  - e. All of the above
  - f. None of the above
  
3. Bonus: True or False: The MLB (Major League Baseball) Replay Command Center is located in New York.

### Module 5.0: What is a Golf Ball?

1. Which of the following properties would *not* help you find out the function of an object?
  - a. Weight
  - b. Material type
  - c. Color
  - d. Size

2. What properties of a golf ball have the largest impact on its function?
  - a. Material type
  - b. Color
  - c. Weight
  - d. Size
3. Explain why this statement is true: Golf balls were specifically engineered for a specific function.

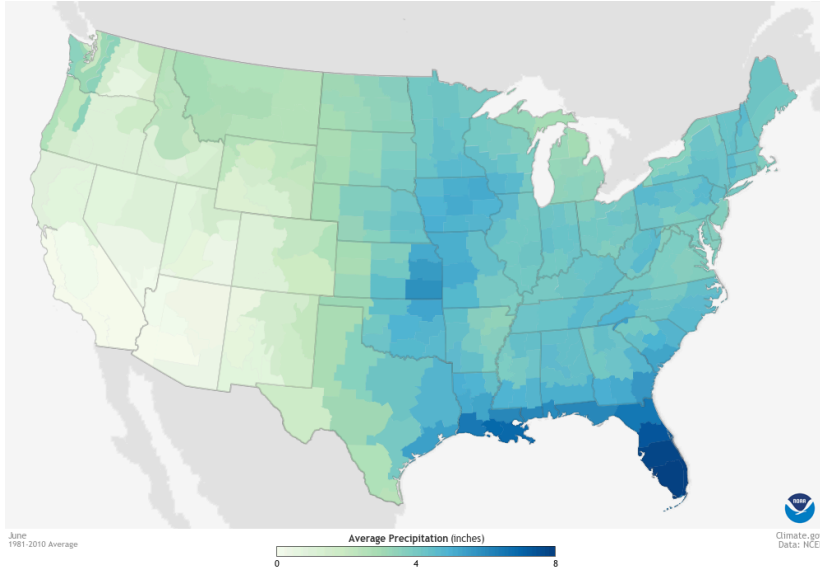
#### Module 6.0: Scoring in Golf

4. What mathematical expression shows the best golf score to the worst?
  - a.  $10 > 9 > 4$
  - b.  $4 < 9 < 10$
  - c.  $1 < 4 < 8$
  - d.  $8 > 4 > 1$
5. What algorithm would be the most useful in calculating a total golf score?
  - a. Add all strokes together and subtract from the par of the course.
  - b. Subtract each hole from par and add together each hole.
  - c. Multiply the strokes by the hole number and divide by 18.
  - d. Add par and the number of strokes and subtract the handicap.

#### Module 7.0: Force of a Golf Swing

1. What causes the golf ball to be in motion?
  - a. Radiation Energy
  - b. Collision
  - c. Balanced Forces
  - d. Unbalanced Forces
2. Which of the following would *not* increase the energy of the golf ball?  
(*Hint: there is more than one answer*).
  - a. Increase the speed
  - b. Hit it higher
  - c. Hit it harder
  - d. Decrease the weight (mass)
  - e. Increase the weight (mass)
3. T or F: It is important to control the other variables (like the person hitting the ball) in an experiment.

#### Module 8.0: Climate and Weather in Golf



1. Based on the above map, what area of the country has the highest level of precipitation?
  - a. Northeast
  - b. Midwest
  - c. Southeast
  - d. Southwest
  
2. Why is precipitation important for a golf course location?
  
3. T or F: The climate of an area determines if the area should support a golf course.

## **Answer Key**

### Module 1.0: Softball vs. Baseball

1. C
2. True
3. D

### Module 2.0: The Field of Play

1. A and D
2. Answers will vary.
3. D

### Module 3.0: Is it a Ball or Strike?

1. D
2. D

3. F

#### Module 4.0:Advancements in Baseball

1. F
2. E
3. T

#### Module 5.0: What is a Golf Ball?

1. C
2. C
3. Answers will vary. Different balls can be made of similar material (baseball), have a similar size (ping pong ball), or weight (tennis ball), as well as behave differently due to other properties. Only golf balls have a specific set of properties designed to behave as needed on the golf course

#### Module 6.0: Scoring in Golf

1. C
2. A

#### Module 7.0: Force of a Golf Swing

1. D
2. B, D
3. T

#### Module 8.0: Climate and Weather in Golf

1. C
2. Answers will vary. Provides the water for important grass growth with irrigation.
3. T