

# Assessment Questions

## **Module 1.0: Basketball Matters**

1. True or False: All solids behave the same way.
2. Which of the following evidence best supports how you know there is matter inside the ball?
  - a. The ball gets heavier when you put more air in it.
  - b. When the ball is full it bounces differently.
  - c. When the ball is empty it has a different shape.
  - d. The ball is different from other balls.

## **Module 2.0: Shot Tracking with and without Technology**

1. Which of the following mathematical statements is correct?
  - a.  $3/10 > 1/10$
  - b.  $1/10 < 1/20$
  - c.  $7/10 = 9/10$
  - d.  $8/10 < 4/10$
2. In a basketball game, Player 1 made three (3) free throws shots; Player 2 made five (5) free throw shots; Player 3 made two (2) free throw shots. Put their total points in order from smallest to largest:
  - a.  $2 > 3 < 4$
  - b.  $3 > 5 > 2$
  - c.  $2 < 3 < 4$
  - d.  $6 < 7 < 9$

## **Module 3.0: Engineer a Hole-in-One**

1. True or False: Engineers need to explore a problem prior to creating a solution.
2. Which of the following best describes criteria in the EDP (Engineering Design Process)?
  - a. Requirements
  - b. Steps
  - c. Setbacks
  - d. Building materials
3. Select the option from below that best completes the EDP (Engineering Design Process):  
Identify the problem → \_\_\_\_\_ → Build → \_\_\_\_\_ → Redesign
  - a. Build, Present
  - b. Brainstorm, Present
  - c. Recharge, Focus
  - d. Rebuild, Design

### **Module 4.0: Finding the Sweet Spot: Force of a Golf Swing**

1. True or False: The amount of force in a golf swing does not affect the push on the golf ball.
2. If the force of a golf swing is stronger the ball will go...
  - a. Slower
  - b. Shorter
  - c. Farther
  - d. Smaller
3. The angle of the golf club face affects the ball's...
  - a. Momentum
  - b. Drive
  - c. Direction
  - d. Speed

### **Module 5.0: Stroke of Energy**

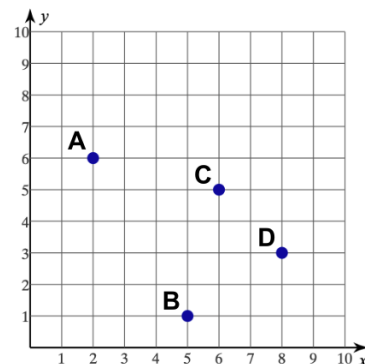
1. True or False: *Distance* and *time* are equally important parts in determining Velocity.
2. Which of the following is accurate when hitting a ball...
  - a. More body movement = more direction
  - b. More body movement = less movement
  - c. More body movement = less energy
  - d. More body movement = more velocity

### **Module 6.0: Dimensions of the Court**

1. True or False: A coordinate plane system can calculate the distance a player has to travel to hit the ball from their opponent.

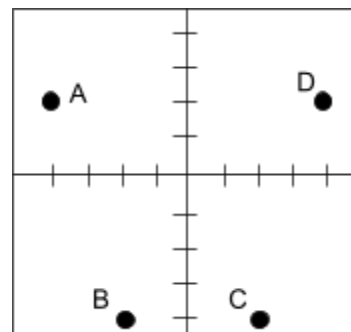
2. Which of the following is the coordinate for Point B?

- a. 1,5
- b. 5,1
- c. 1,6
- d. 4,2



3. Which of these points is located in coordinate (2,-4)?

- a. Point A
- b. Point B
- c. Point C
- d. Paint D



### **Module 7.0: Forces in Soccer**

1. True or False: Objects transfer energy when they collide.
2. Select the best option from below that best completes the following statement:  
more \_\_\_\_\_, more \_\_\_\_\_.
  - a. Force, energy
  - b. Energy, motion
  - c. Force, Force
  - d. Motion, Force

### **Module 8.0: Penalty Shootout: Kicks and Probability**

1. True or False: A penalty kick in soccer is largely based on chance.
2. A \_\_\_\_\_ is a claim that one assumes is true based on observations and background information; supported or not supported by experimental evidence.
  - a. Conclusion
  - b. Scientific Method
  - c. Theory
  - d. Hypothesis
3. Which of the following equations is accurate to determine shots made based on the following statement:  
I scored 6 out of 10 shots taken.
  - a.  $10 - 6 = 4$
  - b.  $6 + 4 = 10$
  - c.  $10 - 4 = 6$
  - d.  $4 - 10 = -6$
  - e. None of the above