Module 1.1: BASKETBALL MEASUREMENTS

1. What is the perimeter of the following box?
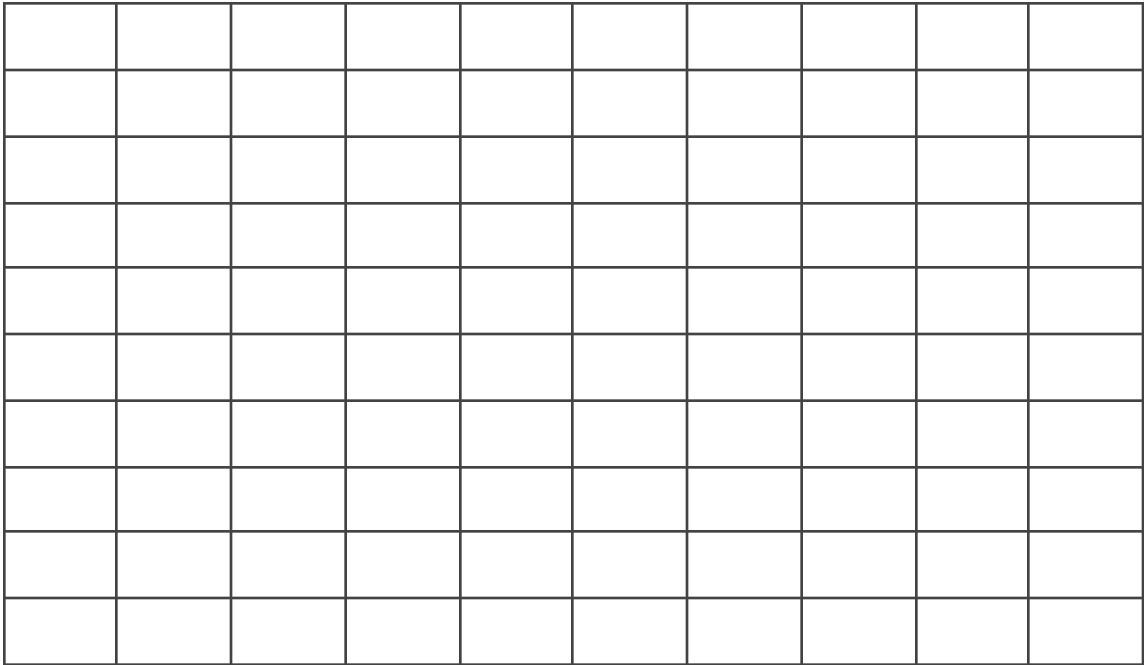
    a. 36
    b. 38
    c. 40
    d. 42

2. In order to measure the area of a basketball court, what information is needed?
    a. The length of the free throw line
    b. The perimeter
    c. The number of tiles in the gym
    d. The length of the court

<u>Module 2.1: FORCES IN BASKETBALL</u>

1. What force makes the basketball fall to the ground?
    a. Gravity force
    b. Downward force
    c. Upward force
    d. Mass force

2. Why is it important to keep everything the same during an experiment?
    a. To measure variables
    b. To control variables
    c. To change variables
    d. To connect variables

Module 3.1: UNDERSTANDING BASKETBALL

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 4.1: MOTION AND BASKETBALLS

1. Speed is dividing:
   a. Distance over mass
   b. Time over Distance
   c. Mass over Distance
   d. Distance over time

2. If a player passes the ball 12 feet down court and the ball gets to his/her teammate in 2 seconds (weight of the ball is 1 pound), how fast is the ball traveling?
   a. 12 feet per pound
   b. 6 feet per second
   c. ½ pounds per second
   d. 2 seconds per pound

Module 5.1: ENGINEERING DESIGN CHALLENGE

1. When should you redesign?
    a. As you're building the original design.
    b. After your beginning research.
    c. After collecting data during the test.
    d. As you're testing the original design.

2. In basketball, coaches use the Engineering Design Process to create new plays. What should the coach do <u>first</u>?
    a. Try out a plan
    b. Identify the problem
    c. Brainstorm multiple ideas with the team
    d. Research what other coaches are doing

Module 6.1: CALCULATING CALORIES

1. In the WNBA, Candace Parker weighs 175 pounds and plays approximately 30 minutes per game. How many calories will she burn during her playing time in a game? *Example: Lebron James: (250 ÷ 2) x 7 x .5 hours = 437.5 Calories Burned.*
   a. 612 calories
   b. 153 calories
   c. 306 calories
   a. 5250 calories

2. If you wanted to determine how many calories Candace Parker burned in a season, which of the following would you do?
   a. Check her Fitbit.
   b. Multiply the number of games she played by 7 (MET value for basketball).
   c. See how much Powerade she drinks.
   d. Add up all her playing time and calculate.

<p style="text-align:center;">Module 7.2: SHOT TRACKING</p>

1. Which of the following mathematical statements are 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 shots; Player 2 made three 3-point shots; Player 3 made 2 shots and one 3-point shot. Put their total points in order from smallest to largest:
    a. 2 > 3 < 4
    b. 6 > 7 > 9
    c. 2 < 3 < 4
    d. 6 < 7 < 9

Module 8.1: ADVANCEMENTS IN SHOES TECHNOLOGY

1. True or False: Shoes and clothing are examples of technology.

2. In analyzing technology, which of the following is the best way to collect information?
    a. Take measurements and test the equipment
    b. Record the color and style
    c. Note how the cost has changed over time
    d. Look it up online

KEY

Module 1.1: BASKETBALL MEASUREMENTS
1. C
2. D

Module 2.1: FORCES IN BASKETBALL
1. A
2. B

Module 3.1: UNDERSTANDING BASKETBALL
1. F
2. C

Module 4.1: MOTION AND BASKETBALLS
1. D
2. B

Module 5.1: ENGINEERING DESIGN CHALLENGE
1. C
2. B

Module 6.1: CALCULATING CALORIES
1. C
2. D

Module 7.2: SHOT TRACKING
1. A
2. D

Module 8.1: ADVANCEMENTS IN SHOES TECHNOLOGY
1. F
2. A