05-06-Sample Quiz-Modeling With Geometry

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. Georgia’s state capitol building has gold dome on it. A contractor is hired to refinish it and needs to find the approximate surface area of the dome.
   
   What geometric solid would approximately describe the dome?
   
   a. prism  
   b. cone 
   c. hemisphere  
   d. pyramid 

2. Which geometric solids could be used to describe the approximate shape of the ice cream dessert?

   a. square based pyramid and prism  
   b. square based pyramid and hemisphere  
   c. cone and prism 
   d. cone and hemisphere
3. Jeff has to replace the roof on his house. His roof is approximately a square based pyramid. A roofer said he charges $5 per square foot of roof that he replaces. To the nearest hundred dollars, how much can Jeff expect to pay the roofer to replace the roof on his house? (hint: remember only the lateral faces of they pyramid would need to be replaced).

a. $1,800  
   b. $3,300  
   c. $5,400  
   d. $9,900

4. A snowman is created by creating two spheres directly on top of one another. The base sphere has a circumference of 113 inches and the top sphere has a circumference of 88 inches.

Approximately, how tall is the snowman in inches not including his hat?

a. 32 inches  
   b. 46 inches  
   c. 64 inches  
   d. 70 inches
Each person standing in a comfortably crowded area requires 2.5 square feet of floor space.

A manager at a mobile phone store will be holding an event in which she will be giving away a couple of the latest Y-Phones. She needs to know the maximum capacity of the number of people in a crowd that can fit in her parking lot if all the cars were removed.

Use the dimensions provided in the aerial diagram of her store’s parking lot shown at the right to determine how many people the lot could hold if each person would require a minimum of 2.5 square feet.

a. 560 people  
   b. 890 people  
   c. 1440 people  
   d. 2400 people

Matt and Kelly both purchased the same type mulch to be used in a garden. They both spent exactly $60 each on mulch.

- Matt purchased loose mulch in which a truck dumped it in his driveway as shown in the picture.
- Kelly purchased 16 bags of mulch and each bag contains 3 cubic feet of mulch.

Which person got a better deal for the money spent? (i.e. Who got the most mulch?)

a. Matt got the better deal.  
   b. Kelly got the better deal.  
   c. They both got the same amount. 
   d. There is not enough information to determine who got the better deal.
7. A restaurant owner purchased some salt that was in a cylindrical container with a diameter of 3.2 inches and a height of 5.4 inches. The container was full.

Approximately, how many salt shakers can she expect to fill with the purchased salt, if the salt shakers are also cylinders with a diameter of 1.2 inches and a height of only 3 inches?

a. 7 salt shakers     c. 13 salt shakers
b. 11 salt shakers    d. 16 salt shakers