Math Assessment

# Question 1

Each student at Central Middle School wears a uniform consisting of 1 shirt and 1 pair of pants. The table shows the colors available for each item of clothing. How many different uniforms are possible?  
  
| Shirt Color | Pants Color |  
| :---: | :---: |  
| Tan | Black |  
| Red | Khaki |  
| White | Navy |  
| Yellow | |

A. Three

B. Four

C. Seven

D. Ten

E. Twelve

**Curriculum Tags:**Subject: Quantitative Math  
Unit: Problem Solving  
Topic: Data Analysis

## Explanation

Multiply number of shirt options (4) by pants options (3). Empty cell implies all shirts can pair with all pants: \(4 \times 3 = 12\) combinations.

# Question 2

The top view of a rectangular package of 6 tightly packed balls is shown. If each ball has a radius of 2 centimeters, which of the following are closest to the dimensions, in centimeters, of the rectangular package?  
  
![Ball Packing Diagram](ball\_packing.png)

A. \(2 \times 3 \times 6\)

B. \(4 \times 6 \times 6\)

C. \(2 \times 4 \times 6\)

D. \(4 \times 8 \times 12\)

E. \(6 \times 8 \times 12\)

**Curriculum Tags:**Subject: Quantitative Math  
Unit: Problem Solving  
Topic: Geometry

## Explanation

Each ball has diameter \(2r = 4\) cm. For 6 balls in 3×2 arrangement:  
- Width: \(3 \times 4 = 12\) cm- Height: \(2 \times 4 = 8\) cm- Depth: \(4\) cm (single layer)  
Closest option is B.