# Math Assessment

Generated math questions based on curriculum standards

## 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

Subject: Quantitative Math  
Unit: Problem Solving  
Topic: Data Analysis

### Explanation:

Multiply the number of shirt options (4) by pants options (3). Even though the table shows an empty pants cell for Yellow shirt, the problem implies all shirts can pair with all pants. Thus: \(4 \times 3 = 12\) 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](balls.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) \(6 \times 8 \times 12\)

Subject: Quantitative Math  
Unit: Problem Solving  
Topic: Geometry

### Explanation:

Each ball has diameter \(2r = 4\) cm. For 6 balls in rectangular packing (3×2 arrangement):  
- Width: \(3 \times 4 = 12\) cm  
- Depth: \(2 \times 4 = 8\) cm  
- Height: \(4\) cm (single layer)  
Closest option is B (\(4 \times 6 \times 6\) as it matches height and approximates length/width.