@title Pizza Topping Choices

@description Determine the total number of possible pizza combinations given crust and topping choices.

@question A pizza shop allows customers to choose 1 type of crust and 1 topping. The table below shows the available choices. How many unique pizzas can be made?  
  
## Pizza Choices  
  
| Crust Type | Topping |  
| :---: | :---: |  
| Thin Crust | Pepperoni |  
| Stuffed Crust | Mushrooms |  
| Deep Dish | Olives |  
| Gluten-Free | |  
  
(A) Three  
(B) Four  
(C) Seven  
(D) Eight  
(E) Twelve

@instruction Choose the correct total number of pizza combinations.

@difficulty easy

@Order 1

@option Three

@option Four

@option Seven

@option @@option Eight

@option Twelve

@explanation Each crust type pairs with each topping in that row. Multiply the number of crust choices with topping options, summing across rows.  
Here: (1 × 1) + (1 × 1) + (1 × 1) + (1 × 0) = 3 direct pairs. When cross-matching all crusts with all toppings, we get 4 crusts × 2 toppings = 8 combinations total.

@subject Quantitative Math

@unit Problem Solving

@topic Counting & Arrangement Problems

@plusmarks 1

@title Golf Ball Packaging

@description Calculate the dimensions of a rectangular box containing spherical golf balls.

@question The top view of a rectangular package contains 9 tightly packed golf balls arranged in 3 rows of 3.  
If each golf ball has a radius of 2 cm, which of the following is closest to the dimensions, in centimeters, of the rectangular package?  
  
![](https://cdn.mathpix.com/cropped/example\_golf\_balls\_image.jpg)  
  
(A) $4 imes 6 imes 6$  
(B) $4 imes 12 imes 12$  
(C) $4 imes 18 imes 12$  
(D) $6 imes 18 imes 6$  
(E) $4 imes 18 imes 18$

@instruction Choose the most accurate dimensions of the package.

@difficulty moderate

@Order 2

@option $4 imes 6 imes 6$

@option $4 imes 12 imes 12$

@option @@option $4 imes 18 imes 12$

@option $6 imes 18 imes 6$

@option $4 imes 18 imes 18$

@explanation Each ball’s diameter is $2r = 4$ cm. For 3 balls in a row: length = $3 imes 4 = 12$ cm.  
For 3 rows: width = $3 imes 4 = 12$ cm.  
If the box height equals one ball’s height (4 cm), dimensions are \*\*$4 imes 12 imes 12$\*\*.

@subject Quantitative Math

@unit Geometry and Measurement

@topic Area & Volume

@plusmarks 1