Question 1:

@title Math Assessment - Meal Combinations

@description This question tests your ability to count combinations in everyday scenarios.

@question At the Sunny Side Cafeteria, there are 5 different main dishes and 4 different side dishes. How many different meals can be served at the cafeteria?

@instruction Choose the correct number of different meals.

@difficulty easy

@Order 1

@option Six

@option Nine

@option Fifteen

@@option Twenty

@option Twenty-five

@explanation To find the total number of possible combinations, multiply the number of main dish options (5) by the number of side dish options (4). That gives \( 5 \times 4 = 20 \) different possible meals.

@subject Quantitative Math

@unit Data Analysis & Probability

@topic Counting & Arrangement Problems

@plusmarks 1

Question 2:

@title Math Assessment - Geometry and Measurement

@description This question assesses your understanding of dimensions and spatial arrangement of spheres.

@question The top view of a rectangular package contains 8 tightly packed balls arranged in 2 rows of 4. If each ball has a radius of 3 centimeters, which of the following are closest to the dimensions, in centimeters, of the rectangular package?

@instruction Choose the correct dimensions of the package.

@difficulty moderate

@Order 2

@option \( 3 \times 4 \times 16 \)

@option \( 3 \times 6 \times 12 \)

@@option \( 6 \times 6 \times 24 \)

@option \( 8 \times 8 \times 24 \)

@explanation Each ball has a diameter of \( 2 \times 3 = 6 \) cm. In a 2-row arrangement, the width is \( 2 \times 6 = 12 \) cm. The length is \( 4 \times 6 = 24 \) cm. The height is the diameter of one ball, \( 6 \) cm. Thus, the dimensions are \( 6 \times 12 \times 24 \) cm.

@subject Quantitative Math

@unit Geometry and Measurement

@topic Solid Figures (Volume of Cubes)

@plusmarks 1