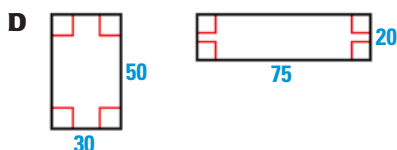
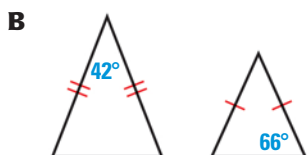
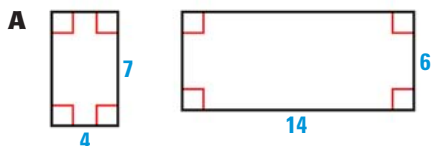


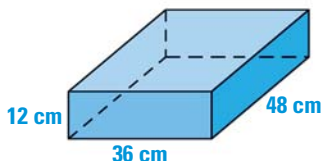
SIMILAR FIGURES AND SOLIDS ON TAKS

Below are examples of similar figure and solid problems in multiple choice format. Try solving the problems before looking at the solutions. (Cover the solutions with a piece of paper.) Then check your solutions against the ones given.

1. Which pair of polygons are similar?



2. Which dimensions correspond to a rectangular prism that is similar to the one shown below?



- F** 3 cm by 9 cm by 16 cm
G 6 cm by 12 cm by 16 cm
H 18 cm by 24 cm by 72 cm
J 21 cm by 63 cm by 84 cm

Solution

Two polygons are similar if corresponding angles are congruent and corresponding side lengths are proportional.

Choice A: The rectangles are not similar because $\frac{14}{7} \neq \frac{6}{4}$.

Choice B: The triangle on the right has angles measuring 66° , 66° , and $180^\circ - 2(66^\circ) = 48^\circ$. Because none of these angle measures is 42° , the two triangles cannot be similar.

Choice D: The rectangles are not similar because $\frac{75}{50} \neq \frac{20}{30}$.

Choice C: The third angle in the triangle on the left measures $180^\circ - 43^\circ - 85^\circ = 52^\circ$. The two triangles both have 85° and 52° angles, so they are similar by the Angle-Angle Similarity Postulate.

The correct answer is C.

- (A)** **(B)** **(C)** **(D)**

Solution

Two rectangular prisms are similar if corresponding edge lengths are proportional.

Choice F is not similar because $\frac{12}{3} \neq \frac{48}{16}$.

Choice G is not similar because $\frac{12}{6} \neq \frac{36}{12}$.

Choice H is not similar because $\frac{36}{24} \neq \frac{48}{72}$.

Choice J is similar because $\frac{12}{21} = \frac{36}{63} = \frac{48}{84}$.

The correct answer is J.

- (F)** **(G)** **(H)** **(J)**