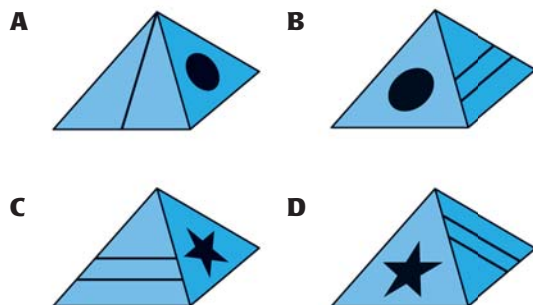
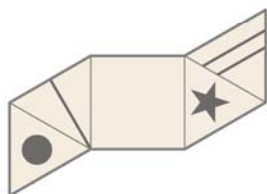


TAKS PROBLEMS ON NETS AND COMPONENTS OF SOLIDS

Below are examples of problems in multiple choice format that involve nets and components of solids. 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 three-dimensional figure does the net shown represent?



2. How many faces, edges, and vertices does a pentagonal prism have?

- F** 6 faces, 10 edges, and 6 vertices
G 7 faces, 15 edges, and 10 vertices
H 7 faces, 15 edges, and 20 vertices
J 9 faces, 12 edges, and 9 vertices

Solution

The net represents a square pyramid.

Choice A correctly positions the face with the single stripe next to the face with the circle, but the stripe does not intersect a corner of the base, so this choice is incorrect.

Choice B has the face with the circle next to the face with the two stripes, which is incorrect.

Choice C has the faces with the correct orientation.

Choice D has the face with the two stripes positioned so that the stripes are not parallel to the base of the pyramid. Therefore, this choice is incorrect.

The correct answer is C.

- A B C D

Solution

Sketch a pentagonal prism.

The pentagonal prism shown has 7 faces, 15 edges, and 10 vertices.



Check your sketch by using Euler's theorem.

$$F + V = E + 2$$

$$7 + 10 \stackrel{?}{=} 15 + 2$$

$$17 = 17 \checkmark$$

The correct answer is G.

- F G H J