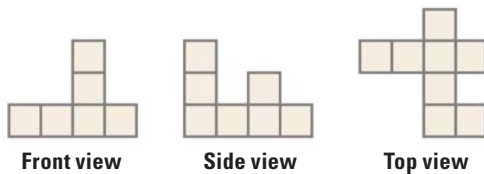


ORTHOGRAPHIC AND ISOMETRIC DRAWING PROBLEMS ON TAKS

Below are examples of orthographic and isometric drawing 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. The front, side, and top views of a solid built with cubes are shown. How many cubes are needed to construct the solid?



- A 10
- B 11
- C 13
- D 14

Solution

The front view shows that the solid has three levels of cubes. Find the number of cubes in each level, then add the results.

The top view shows that the first level has 8 cubes.

The front and side views show that the second level has 2 cubes.

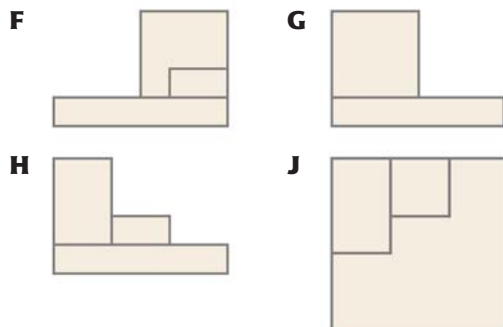
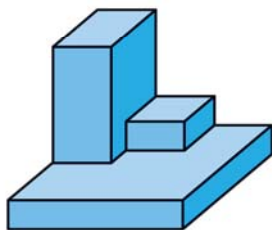
The front and side views show that the third level has 1 cube.

So, the total number of cubes needed to construct the solid is $8 + 2 + 1 = 11$ cubes.

The correct answer is B.

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

2. Which of the following represents the top view of the solid shown?



Solution

The top view of the solid will show only the details of the solid that are visible looking down at the solid.

Choice F shows the details of the solid visible from the right-side view, so it is incorrect.

Choice G shows the details of the solid visible from the left-side view, so it is incorrect.

Choice H shows the details of the solid visible from the front view, so it is incorrect.

Choice J shows the details of the solid visible from the top view, so it is correct.

The correct answer is J.

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