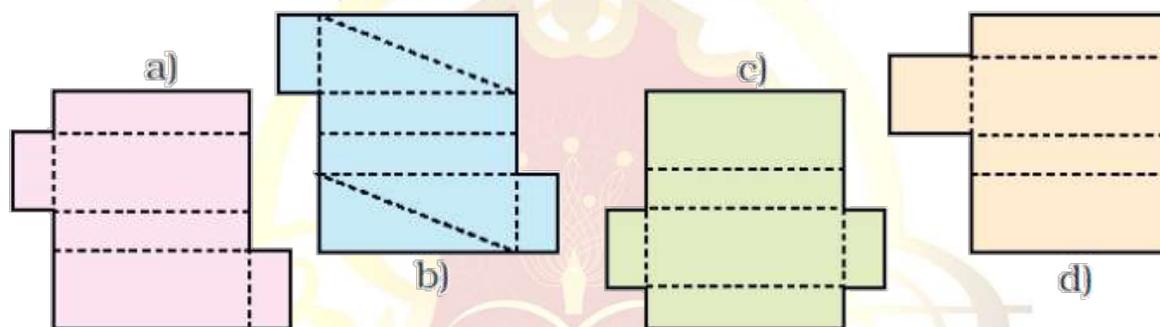# Boxes and Sketches

Question 1: (Page 126)

Ramya went to buy sweets. The shopkeeper took a paper cut-out and quickly made a lovely pink box for the sweets!

She made four more shapes. Each is to be folded along the dotted lines. You have to find out which of these can be made into a box.
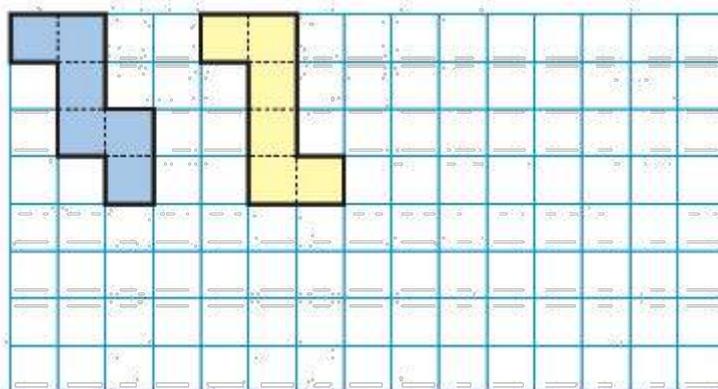

Answer:

Observe the given shapes. After folding along the given dotted lines, the shapes a) and (c) can be made into boxes.

Question 1: (Page 127)

Buddha wants to make a paper cube using a squared sheet. He knows that all the faces of a cube are squares. He draws two different shapes.

a) Will both of these shapes fold into a cube?

b) Draw at least one more shape which can fold into a cube.

c) What will be the area of each face of the cube?

d) Draw one shape which will not fold into a cube.

e) Look around and discuss which things around you look like a cube. List a few.

Answer:

a) A cube has four square shaped faces. Observe the given shapes. Both the shapes can be folded into cubes.

b) Answers may vary. Following is a shape that can be folded into a cube.
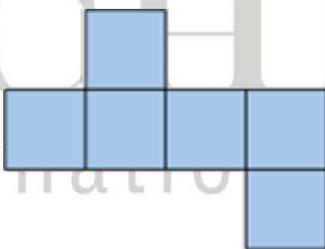
c) Each face of the cube is a square with 1 cm as its side. Therefore, the area of each face of the cube will be 1 square cm.

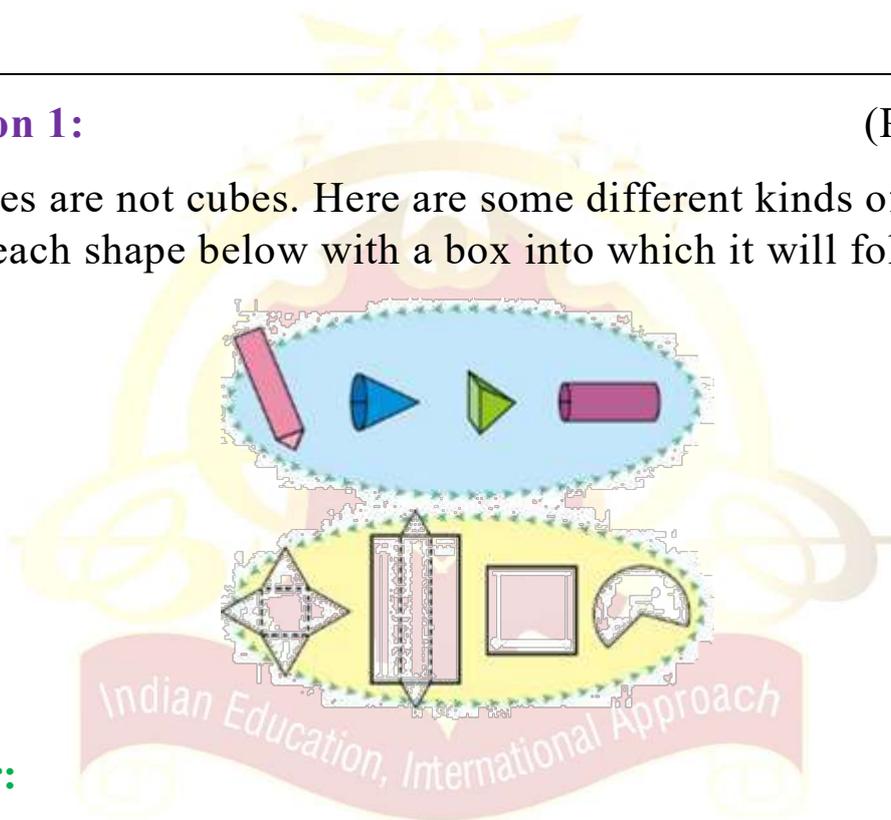**d)** Answers may vary. Following is a shape that cannot be folded into a cube.

e) Do it by yourself. Answers may vary. The shape of dice, sugar cubes, ice cubes, etc., resembles a cube.
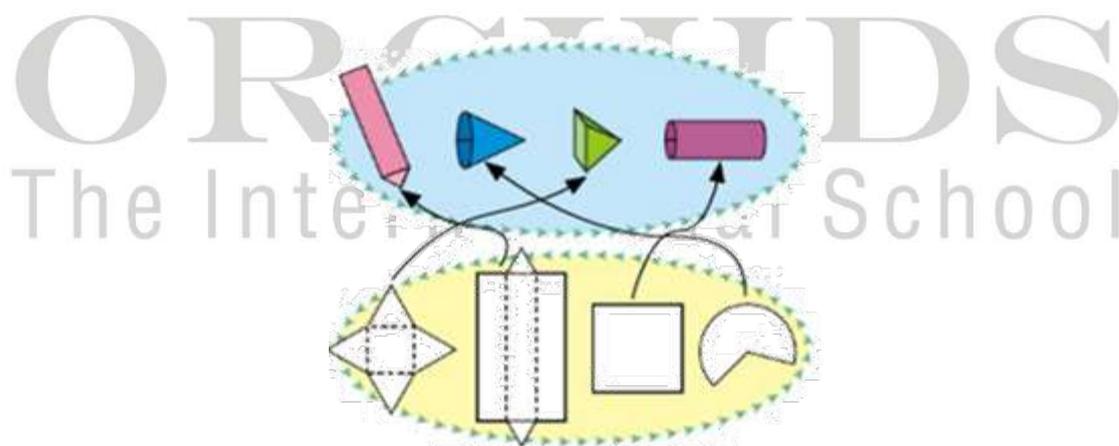

Question 1: (Page 128)

All boxes are not cubes. Here are some different kinds of boxes. Match each shape below with a box into which it will fold
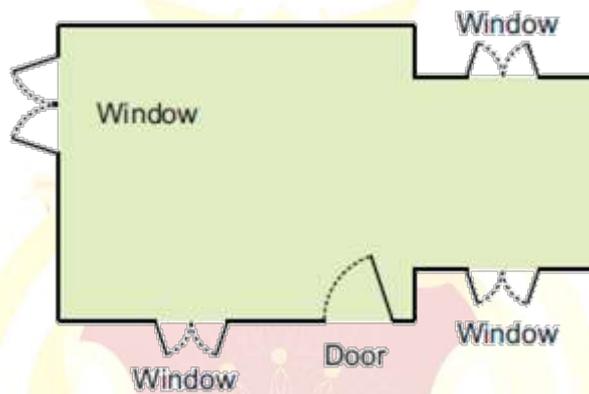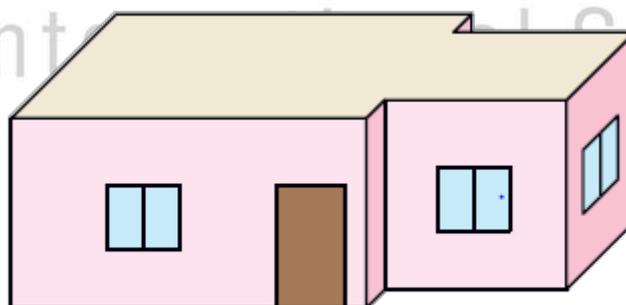

Answer:

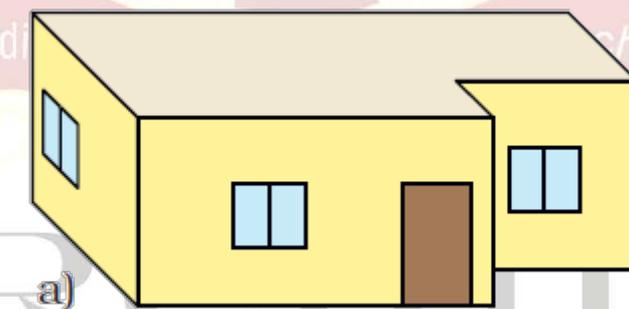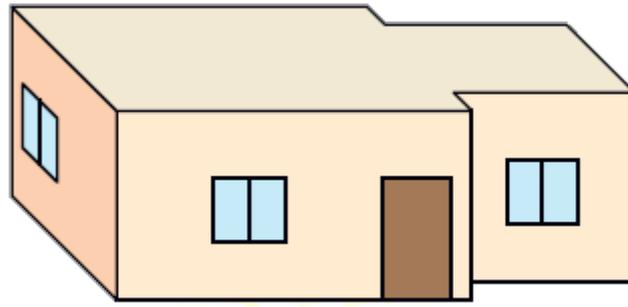The correct answer is:

Question 1: (Page 129)

A) For making a house a floor map is first made. Have you ever seen a floor map? Here is a floor map of Vibha's house. It shows where the windows and the doors are in the house.
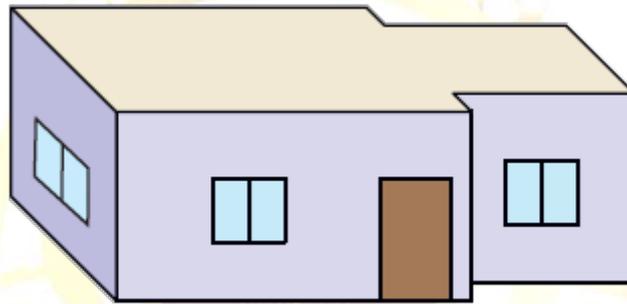

B) Which is the front side of her house? How many windows are there on the front side?
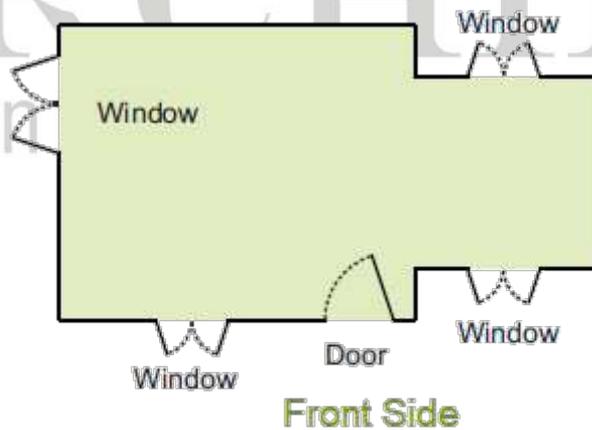
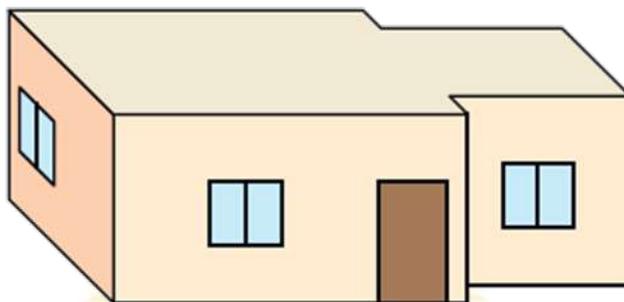**C)** Which one is Vibha's house?

c)

d)

Answer:

A) Do it by yourself. Answers may vary.

B)

Front side of the house is shown below in the floor map. There are two windows on the front side.

Front Side

3) Match the deep drawings with the given floor map. The correct deep drawing of the house is option c).
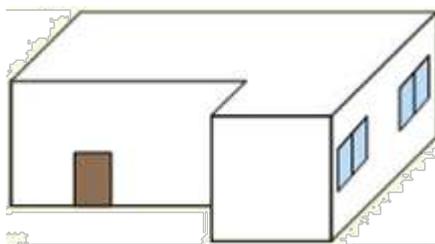

Question 1: (Page 130)

Look at this floor map of a house. Make doors and windows on the deep drawing of this house.
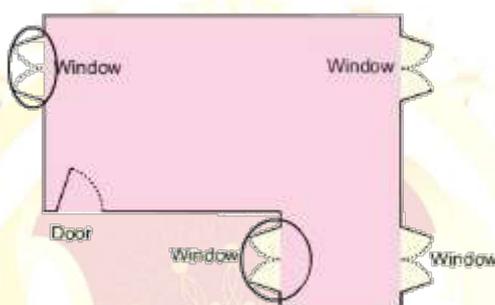

Are there any windows you couldn't show on the deep drawing? Circle them on the floor map.

Answer:

Observe the given floor map and draw doors and windows accordingly in the deep drawing of the house. The correct answer is:
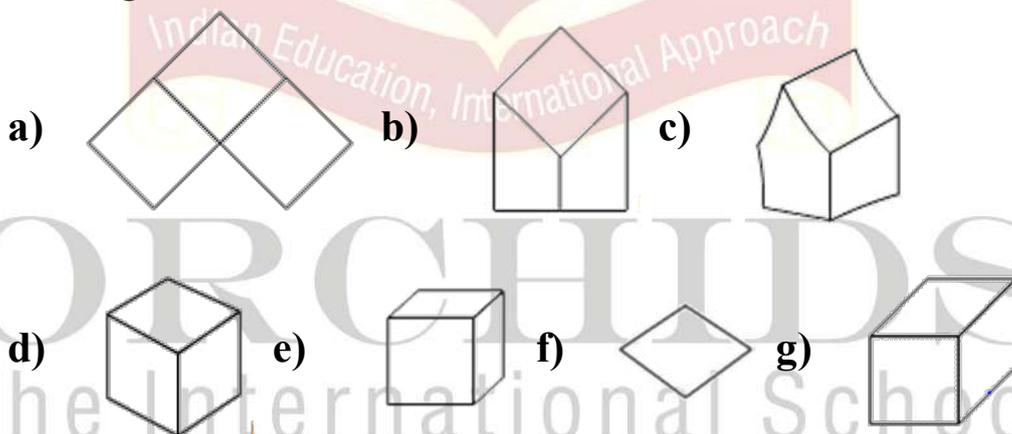
In the deep drawing, there are two windows that are not visible. These windows are circled on the following floor map.

Question 2:

Soumitro and his friends made deep drawings of a cube. These are their drawings.

A) Which of the drawings look correct to you? Discuss.

B) Can you add some lines to make drawing (f) into a deep drawing of the cube?

Answer:

A) A cube has 6 faces, and each face of a cube is a square. Therefore, the drawings (d) and (e) are correct.
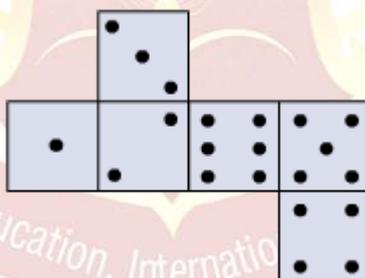
B) The (f) that has been made into a cube by drawing some lines is shown below:
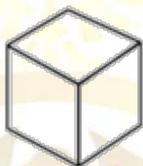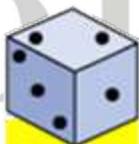

Question 1: (Page 131)

This cut-out is folded to make a cube.
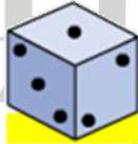

Which of these are the correct deep drawings of that cube?
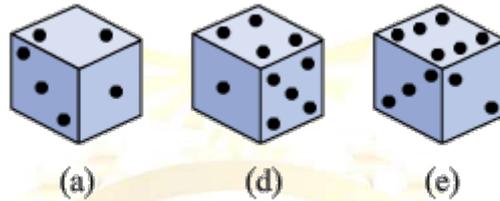
a)   b)   c)

d)   e)

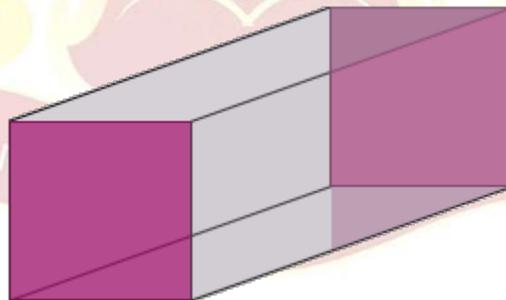**Answer:**

The correct deep drawings are a) d), and e).
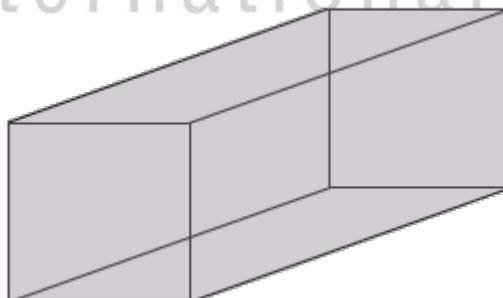

(a)   (d)   (e)

Question 2:

Make a deep drawing of a box which looks like this.

Answer:

Do it by yourself. Answers may vary. A sample deep drawing is shown below.

Question 1: (Page 133)

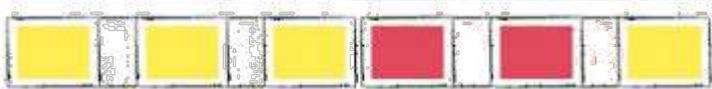Navin, Bhaskar and Pratigya made this bridge using matchboxes.

If you look at the bridge from the top, how will it look? Choose the right drawing below:

a)

b)

Answer:

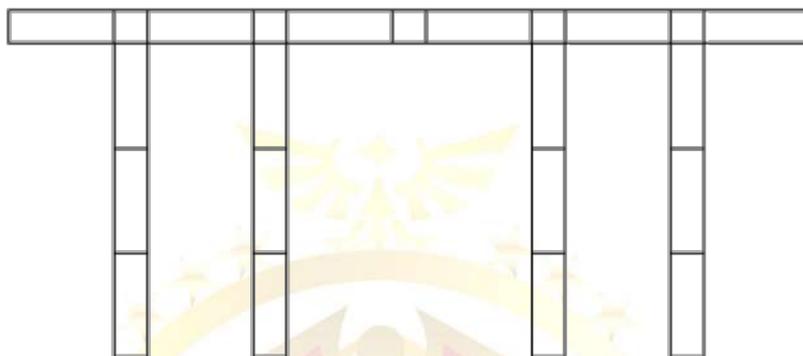The top view of the bridge is:

Question 2:

Look at the photo and try to make a deep drawing of this bridge.

Answer:

.The correct answer is:

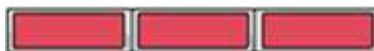## Question 1: (Page 133)

Make drawings to show how this bridge will look:

• From the top   • From the front   • From the side
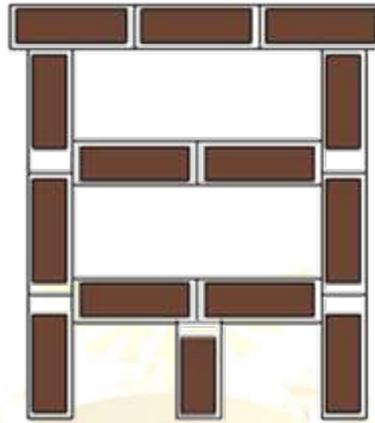

Answer:

The top view of the bridge is:
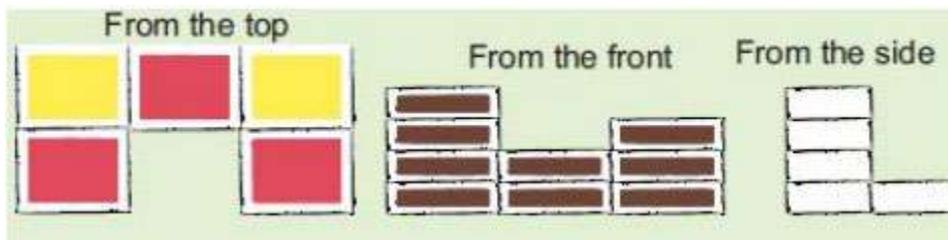

The front view of the bridge is:

The side view of the bridge is:

Question 2:

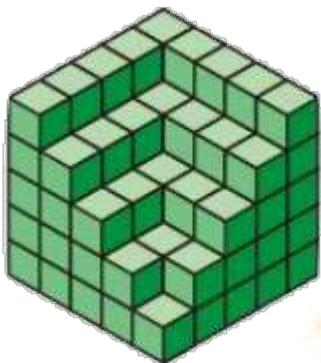Make a matchbox model which looks like this.

Also make a deep drawing of the model in your notebook.
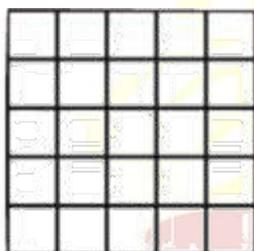
Answer:

Do it by yourself.

Question 3:

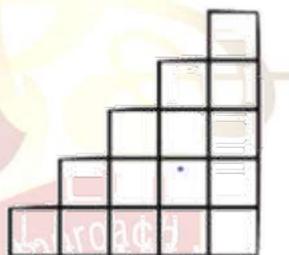**A)** How many cubes are needed to make this interesting model?

B) Here are some drawings of the model. Mark the correct top view drawing with 'T' and the correct side view drawing with 'S'
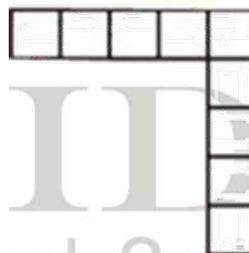
a)

b)

c)

d)

Answer:

A) Observe the given model.

In the top layer, there are:

4 + 5 = 9 cubes.

In the second layer from the top, there are:

4 + 5 + 3 + 4 = 16 cubes

In the third layer from the top, there are:

4 + 5 + 3 + 4 + 2 + 3 = 21 cubes

In the fourth layer from the top, there are:

4 + 5 + 3 + 4 + 2 + 3 + 2 + 1 = 24 cubes

In the bottom layer, there are:

4 + 5 + 3 + 4 + 2 + 3 + 2 + 1 + 1 + 1 = 25 cubes

Therefore, total number of cubes in the model is:

9 + 16 + 21 + 24 + 25 = 95

Hence, 95 cubes are needed to make the given model.

B) The correct answer is:

T   S