



# MATHEMATICS 404

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**Author:**  
Editor:  
Graphic Design:

**Carol Bauler, B.A.**  
Alan Christopherson, M.S.  
JoAnn R. Cumming, A.A.



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# I. PART ONE

## Learn Box

I can learn about flat and solid shapes.  
I can learn about dimensions.

You will need a ruler.



1.1 Match the figure to its name.



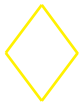
a. \_\_\_\_\_



b. \_\_\_\_\_



c. \_\_\_\_\_



d. \_\_\_\_\_



e. \_\_\_\_\_

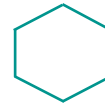
1. oval
2. hexagon
3. pentagon
4. square
5. octagon
6. triangle
7. circle
8. diamond
9. rectangle



f. \_\_\_\_\_



g. \_\_\_\_\_



h. \_\_\_\_\_



i. \_\_\_\_\_

In mathematics, we describe a flat shape as a **plane shape**.

1.2 Is each of the figures above a plane shape? \_\_\_\_\_

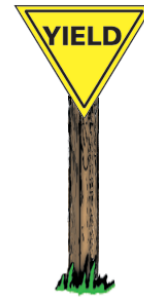
We may say that each one of these figures belongs to the general group of plane shapes.

**Polygons** are closed, plane figures with 3 or more sides.

1.3 Look at the figures above.

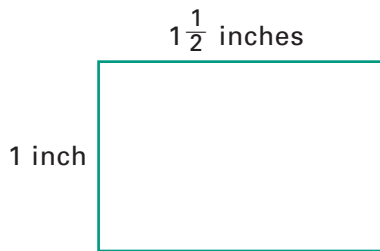
- a. Is each of these figures a closed figure? \_\_\_\_\_
- b. Do all the sides meet and join each other? \_\_\_\_\_
- c. Does each figure have three or more sides? \_\_\_\_\_
- d. Which ones do not have three or more sides? \_\_\_\_\_

Plane shapes are all around us. The piece of paper you are writing on is an example of a rectangle. Doors and windows are rectangles. Watch the road signs when you are riding in a car. Make a list of all the examples of polygons and plane shapes that you find.

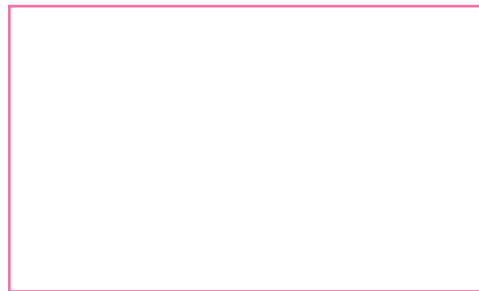


Rectangles and squares can be measured using length and width. The length is the longer side, and the width is the shorter side. Length and width are called dimensions.

The **dimensions** of rectangles and squares are length and width. Rectangles and squares are two dimensional figures.



A.



B.

1.4 Write the dimensions of figure A. length \_\_\_\_\_ width \_\_\_\_\_

1.5 Measure figure B. Write the dimensions. length \_\_\_\_\_ width \_\_\_\_\_

1.6 Write the name of each plane shape by its definition. Look at the figures at the beginning of this section to help you.

a. Three-sided polygon \_\_\_\_\_

b. Four-sided polygon with all sides equal \_\_\_\_\_

c. Four-sided polygon with opposite sides equal \_\_\_\_\_

d. A four-sided polygon that stands on end \_\_\_\_\_

- e. A closed plane shape with no straight sides \_\_\_\_\_
- f. Five-sided polygon \_\_\_\_\_
- g. Six-sided polygon \_\_\_\_\_
- h. Eight-sided polygon \_\_\_\_\_
- i. A flattened closed plane shape with no straight sides \_\_\_\_\_

1.7 What is another word to describe a plane shape? \_\_\_\_\_

1.8 How many sides must a polygon have? \_\_\_\_\_

1.9 What do we call the length and width of a rectangle? \_\_\_\_\_

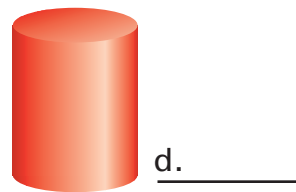
1.10 Match the solid shape with its name.



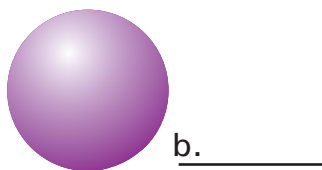
1. cylinder



2. cube

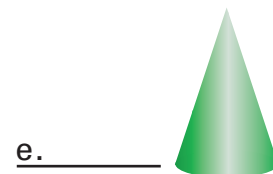


3. sphere



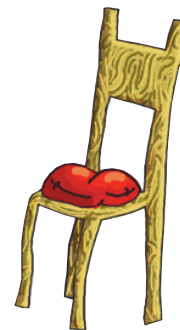
4. pyramid

5. cone

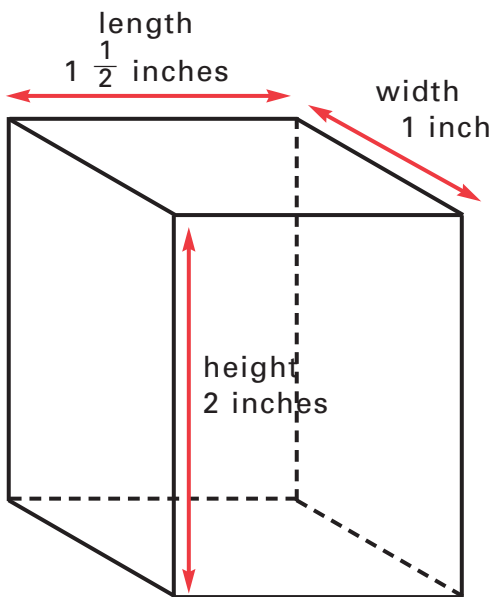


Plane shapes are flat **shapes**. They do not take up space.  
**Solid shapes** do take up space.

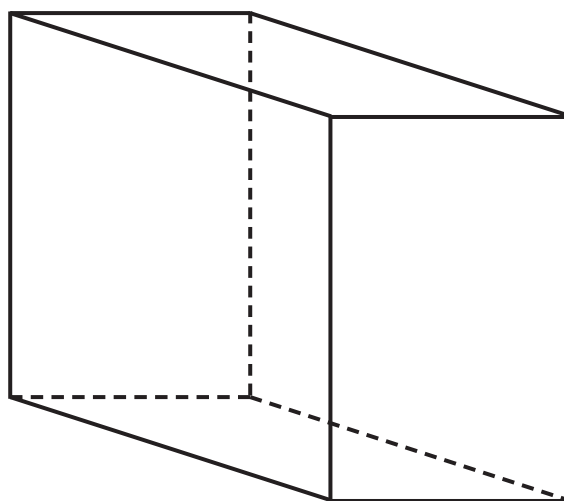
Most of the objects around us are solid shapes. Chairs, desks, and tables are all examples of solid shapes.



The dimensions of a solid **shape** are length, width, and height. Solid shapes are three dimensional figures.



A.



B.

1.11 Write the dimensions of figure A.

length \_\_\_\_\_ width \_\_\_\_\_ height \_\_\_\_\_

1.12 Measure figure B. Write the dimensions.

length \_\_\_\_\_ width \_\_\_\_\_ height \_\_\_\_\_

The sides of a solid are called **faces**.

1.13 Look carefully.

How many faces do you count for figure A? \_\_\_\_\_ B? \_\_\_\_\_