## LIFFEPAC Math



## MATHEMATICS 703: GEOMETRY

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## GEOMETRY

This LIFEPAC ${ }^{\circledR}$ will give you an introduction to some of the concepts that are used in geometry. The word geometry means earth measurement. Two of the main concepts we study in geometry are the shape and size of objects.

## OBJECTIVES

Read these objectives. The objectives tell you what you will be able to do when you have successfully completed this LIFEPAC.

When you have finished this LIFEPAC, you should be able to:

1. Name and measure lines and segments.
2. Name, measure, and construct angles.
3. Name, measure, and construct triangles.
4. Name, measure, and construct quadrilaterals.
5. Construct and measure circles.
6. Construct hexagons.

Survey the LIFEPAC. Ask yourself some questions about this study. Write your questions here.
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## I. SEGMENTS, LINES, AND ANGLES

## OBJECTIVES

When you have completed this section, you should be able to:

1. Name and measure lines and segments.
2. Name, measure, and construct angles.

Geometry begins with the study of lines, segments, and angles. These concepts are needed for understanding the construction of other geometric figures.

## SEGMENTS AND LINES

One of the basic topics we study in geometry is the subject of lines. Most of you have some idea of what a line looks like. These drawings probably represent some of your ideas about lines.
a.

b.

c.

d.

e.

f.


All of these drawings may meet your idea of a line; but in geometry, only three of them would be considered to represent lines. They are (a), (e), and (f).

## DEFINITION

Line: in geometry, a straight line that goes on forever in both directions.

Drawings (a), (e), and (f) pass the test for being lines. Drawings (b), (c), and (d) do not.

We name a line by putting two dots on it and labeling the dots with capital letters.


We can then refer to line $A B$, line $R T$, and line $M N$. To make talking about these lines even easier, we can write their names this way:
$\overleftrightarrow{A B}, \quad \overleftrightarrow{R T}$, and $\overleftrightarrow{M N}$. The symbol $\overleftrightarrow{A B}$ is read line $A B$
紫粦 Write the names of these lines in the blank.
1.1

1.2 $\qquad$

1.3

1.4



On the blanks, write line for the figures that are lines and not line for the figures that are not lines.
1.6 $\qquad$

1.7 $\qquad$

1.8 $\qquad$


