Level 8 Basic Concepts, Parallel, and Perpendicular Lines

## Example

A exact location in space is a point. - $P$ is a point.
A line is a straight path having no endpoints. A line is denoted as $\overleftrightarrow{\mathrm{PQ}}$.
An endless flat surface is called a plane.


Plane is denoted as $\square P Q R$.
The segment $X Y$ is denoted by $\overline{X Y}$. The ray KT is denoted by $\overrightarrow{\mathrm{KT}}$.


The parallel lines $P Q$ and $R S$ are denoted by $P Q \| R S$.


The perpendicular lines $A B$ and $C D$ are denoted by $A B \perp C D$.


## Exercise

1. Answer the following questions with the help of the figure given.
a) List 6 points.
b) Write the names of 5 line segments.

c) Write the names of two pairs of parallel lines.
d) Write the names of two pairs of perpendicular lines.

Level 8
Unit 20.1

Basic Concepts, Parallel, and Perpendicular
Lines

## Exercise

2. Use the diagram from problem 1 to answer the following questions.
a) If $\longleftrightarrow$ RX and $\stackrel{\text { SY }}{\longleftrightarrow}$ are parallel and $\longleftrightarrow$ RX is perpendicular to $\overleftrightarrow{X Y}$, is $\overleftrightarrow{S Y}$ perpendicular to $\stackrel{X Y}{\longleftrightarrow}$ ?
b) What is difference between the lines $\stackrel{\mathrm{SY}}{ }$ and $\overrightarrow{\mathrm{SY}}$ ?
3. Use the figure to the right to answer the following requests.
a) Write the names of a pair of parallel lines.
b) Name two pairs of perpendicular lines.

c) Write the names of two pairs of intersecting lines that are not perpendicular.
d) Write the name of a plane.
e) Write names of five rays that are not lines.
f) Write the names of two triangles.
