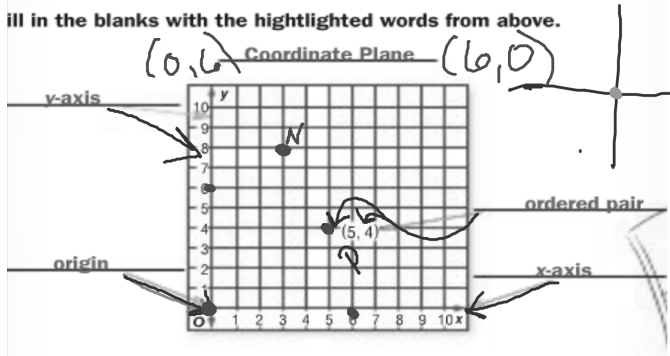


The **coordinate plane** is formed when two perpendicular number lines intersect at their zero points. This point is called the **origin**. The horizontal number line is called the **x-axis** and the vertical number line is called the **y-axis**. An **ordered pair**, such as (2, 3), is a pair of numbers used to locate a point on the coordinate plane.

Fill in the blanks with the highlighted words from above.



Graph Ordered Pairs

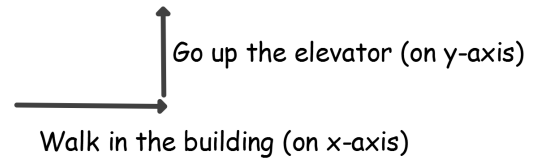
You can use an ordered pair to name any point on the coordinate plane. The first number in an ordered pair is the **x-coordinate**, and the second number is the **y-coordinate**.

The x-coordinate corresponds to a number on the x-axis.

→ (3, 6) ←

The y-coordinate corresponds to a number on the y-axis.

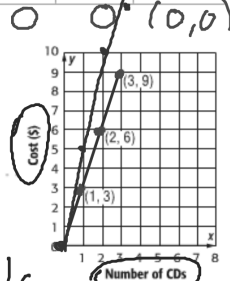
You can express information in a table as a set of ordered pairs. To see patterns, **graph** the ordered pairs on the coordinate plane.



The table shows the cost in dollars to create CDs of digital photos at a photo shop. The table also shows this information as ordered pairs (number of CDs, cost in dollars).

Cost to Create CDs		
Number of CDs, x	Cost in Dollars, y	Ordered Pair (x, y)
1	3	(1, 3)
2	6	(2, 6)
3	9	(3, 9)

1. Graph the ordered pairs.



2. Describe the pattern in the graph.

Straight line
For every 1 CD it will cost \$3
Very steep slope 1:3

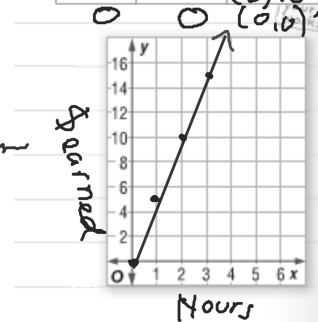
The table shows Gloria's earnings for 1, 2, and 3 hours. The table also shows this information as ordered pairs (hours, earnings).

Gloria's Earnings		
Hours, x	Dollars Earned, y	Ordered Pair (x, y)
1	5	(1, 5)
2	10	(2, 10)
3	15	(3, 15)

a. Graph the ordered pairs.

b. Describe the pattern in the graph.

1:5
Steeper line
for every hour you go up \$5!



You can use tables and graphs to compare ratios. The greater the ratio, the steeper the line will appear.

Two friends are making scrapbooks. Renée places 4 photos on each page of her scrapbook. Gina places 6 photos on each page of her scrapbook.

Make a table for each scrapbook that shows the total number of photos placed, if each book has 1, 2, 3, or 4 pages. List the information as ordered pairs (pages, photos).

Renée's Scrapbook (4 photos)		
Pages, (x)	Photos, (y)	Ordered Pair (x, y)
0	0	(0, 0)
1	4	(1, 4)
2	8	(2, 8)
3	12	(3, 12)
4	16	(4, 16)

Gina's Scrapbook (6 photos)		
Pages, (x)	Photos, (y)	Ordered Pair (x, y)
0	0	(0, 0)
1	6	(1, 6)
2	12	(2, 12)
3	18	(3, 18)
4	24	(4, 24)

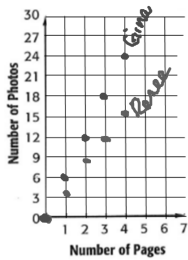
1:4

1:6

Renée's Scrapbook (4 photos)		
Pages, (x)	Photos, (y)	Ordered Pair (x, y)
0	0	(0, 0)
1	4	(1, 4)
2	8	(2, 8)
3	12	(3, 12)
4	16	(4, 16)

Gina's Scrapbook (6 photos)		
Pages, (x)	Photos, (y)	Ordered Pair (x, y)
0	0	(0, 0)
1	6	(1, 6)
2	12	(2, 12)
3	18	(3, 18)
4	24	(4, 24)

A) Graph the ordered pairs for each friend on the same coordinate plane.



B) How does the ratio of photos to each page compare for each person?

Renée 1:4 Gina 1:6

C) Describe the pattern (ratio) _____