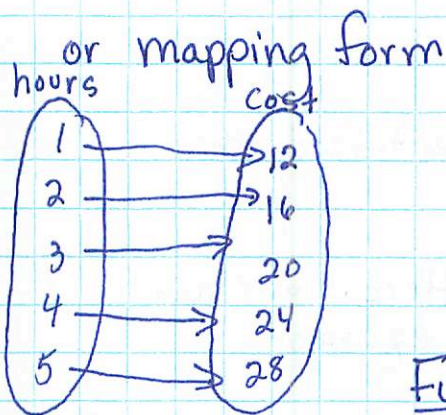


5.1 Linear functions and Graphs

Vocabulary: Relation - a pairing of two sets of numbers
Can be seen in chart form

Ex:

hours	rental cost
1	12
2	16
3	20
4	24
5	28



or in ordered pair form
 $\{(1, 12), (2, 16), (3, 20), (4, 24), (5, 28)\}$

Function - a special type of relation in which each element of the first set is paired with exactly one element of the second set.

What does that mean?

- ★ In chart form... there is no repeating of anything in first column.
- ★ In ordered pair form... there is no repeating of the Xs.

Domain - the first coordinates in a set of pairs (the Xs)

Range - the second coordinates in a set of pairs (the Ys)

★ In a true function, the domain never repeats. ★

Is our example a function? Yes, Xs do not repeat.
What is the domain? $\{1, 2, 3, 4, 5\}$
What is the range? $\{12, 16, 20, 24, 28\}$

Remember that ordered pairs can be plotted and connected to form graphs. Each function here will be a straight line or a linear graph.