Analyze Patterns and Relationships

LESSON 33

Dear Family,

This week your child is learning to analyze patterns and relationships.

Your child is learning ways to describe how two number patterns are related. He or she might see a problem like this:

> *At the school fair, a box of raisins costs $2 and a box of nuts costs $4. How does the cost of a given number of boxes of raisins compare to the cost of the same number of boxes of nuts for 0, 1, 2, 3, or 4 boxes?*

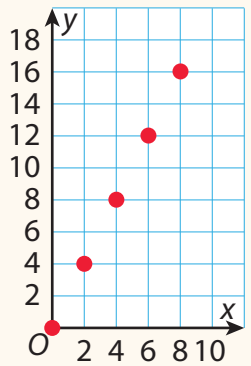
A diagram shows the number patterns for the raisins and the nuts:

You can list the numbers, or **terms,** of the pattern in a table and form ordered pairs of **corresponding terms**.

Raisins, x	Nuts, y	Ordered Pair (x, y)
0	0	(0, 0)
2	4	(2, 4)
4	8	(4, 8)
6	12	(6, 12)
8	16	(8, 16)

Look for a pattern. The second number in each ordered pair is twice the first number. For example, in the ordered pair (4, 8), $8 = 2 \times 4$.

Another way to see how the number patterns are related is to plot the ordered pairs on a graph.



The graph at the right shows a point for each ordered pair in the table. From point to point, the pattern is: move 2 to the right, move up 4.

Invite your child to share what he or she knows about analyzing number patterns and relationships by doing the following activity together.

ACTIVITY ANALYZING PATTERNS

Do this activity with your child to analyze patterns and relationships.

Work with your child to show how the costs of two items are related.

- Together with your child, find the cost of your child's two favorite snacks. Round each to the nearest dollar. (*Example:* A box of crackers costs $2 and a carton of ice cream costs $3.)
- In the table, write the cost of 0, 1, 2, 3, 4, and 5 containers of each snack.

Snack 1: ....., *x*	Snack 2: ....., *y*	Ordered Pair (*x*, *y*)

- Together, plot the ordered pairs on the coordinate plane at the right and describe the relationship between the costs of the snacks.