Multiples and Factors

Dear Family,

This week your child is learning about multiples and factors.

Your child will be using factor pairs, multiples, and composite numbers to solve problems like the one below.

> *Monica is pasting 18 stars in rows on the wall. She wants to put the same number of stars in each row. Find all the ways she can arrange the stars.*

- One way to paste the stars is 3 rows of 6. Another way is 6 rows of 3. 3 and 6 are a **factor pair** of 18 because $3 \times 6 = 18$.

- Other ways to paste the stars are:
  2 rows of 9 or 9 rows of 2
  1 row of 18 or 18 rows of 1

- 18 is a **composite number.** It has factor pairs besides 1 and 18. Factor pairs of 18 are 3 and 6, 2 and 9, 1 and 18.

- 18 is a **multiple** of 1, 2, 3, 6, 9, and 18.

- There are 6 ways Monica can arrange the stars.

Invite your child to share what he or she knows about multiples and factors by doing the following activity together.
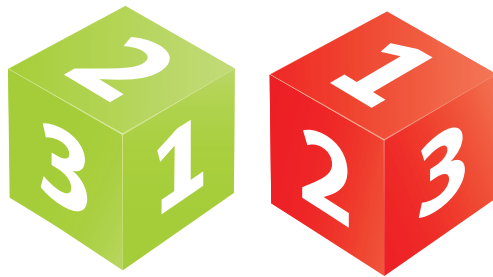
ACTIVITY FACTORS

Do this activity with your child to explore factors.

Materials 2 number cubes

- One player rolls both number cubes and uses the numbers on the cubes to make a two-digit number. Roll again if both numbers are the same.

- The other player reverses the order of the digits to make another two-digit number.

    Example:

    Player 1: 21
    Player 2: 12

- Each player finds all the factor pairs of his or her number.

    Example:

    Player 1: Factor pairs of 21 are 1 and 21, 3 and 7.
    Player 2: Factor pairs of 12 are 1 and 12, 2 and 6, 3 and 4.

- The player with the most factor pairs is the winner of the round.

    Example:

    Player 2 wins the round because the number
    12 has 3 factor pairs. Player 1's number, 21,
    has only 2 factor pairs.

- Play 5 rounds.