

Dear Parents,

Here is what your child is learning in Grade 4, Unit 2 along with some specific ways you can help. Look for additional newsletters for upcoming units.

## ALGEBRA, PATTERNS, AND FUNCTIONS

Students need to:

- Solve for the unknown or variable in an equation.
- Generalize a pattern by stating a rule.
- Write and simplify numeric expressions using number properties.
- Complete a function table using a given rule.

Examples:

- Rachel has \$6 in her piggy bank. Her father gives her some more money. She now has \$14 in her piggy bank. How much money did Rachel's father give her?
  - Choose a variable for the unknown quantity in this situation.
  - Write an equation that represents the relationship between the known and unknown quantities.
  - Solve for the unknown or variable in your equation.
  - What does your solution tell you about the situation?

Sample responses:

- $n$  = the amount of money that Rachel's father gave her
- $6 + n = 14$
- $n = 8$
- Rachel's father gave her \$8.

- Complete the pattern below and write a rule for the pattern.

90, 84, 78, \_\_\_\_\_, 66, \_\_\_\_\_

Sample responses:

90, 84, 78, 72, 66, 60

Rule: Start at 90 and subtract 6.

- Use words and numbers to explain how using grouping and ordering can help you solve the addition problem below.

$$59 + 37 + 63 + 22 + 41 =$$

Sample responses:

I can solve the problem by changing the order and grouping the ones so that  $(9+1) + (7+3) + (2)= 22$ , and then I can group the tens column so that  $(50 +30 + 20) + (60 +40) = 200$ , so the sum is 222.

or

I know that  $59 + 41 = 100$  and  $37 + 63 = 100$ , so I would change the order of the numbers and group them so that  $(59 + 41) + (37 + 63) + 22 = 222$ .

- Complete the function table to show the rule:

$$y = 2 \times w$$

w	y
0	
3	
6	

Sample response:

w	y
0	0
3	6
6	12

## NUMBER RELATIONSHIPS AND COMPUTATION

Students need to:

- Demonstrate mastery of basic multiplication and division fact families.
- Identify and apply multiples and factors of numbers.

Examples:

- Write the answer to make the given equation true and write the 3 related facts.  
 $6 \times 8 = \underline{\quad}$
- List all of the factors of 36.
- Write 4 multiples of 9.

Sample responses:

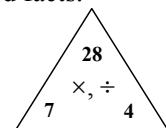
- $6 \times 8 = 48$ ,  $8 \times 6 = 48$ ,  $48 \div 8 = 6$ ,  $48 \div 6 = 8$
- 1, 2, 3, 4, 6, 9, 12, 18, 36
- 9, 18, 27, 36

## WAYS PARENTS CAN HELP

- Discuss story problems with your child. Talk about known quantities (information given in the problem) and unknown quantities (information you are trying to determine).
- Practice finding factors of a number. For example, give your child a set of 24 objects. Ask your child to show all the ways 24 can be divided to make equal groups. The factors can be determined by observing the number of equal groups and the number of objects in each group.  
1 group of 24 or 24 groups of 1  
2 groups of 12 or 12 groups of 2  
3 groups of 8 or 8 groups of 3  
4 groups of 6 or 6 groups of 4  
(Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24)
- Explore multiples of 6 using a six-pack of soda. Ask how many sodas are in 1 pack, 2 packs, 3 packs, etc. (6, 12, 18...) Organize the information in a function table.

Packs of Soda	Number of Sodas
1	6
2	12
3	18

- A fact triangle can be used as an alternative to traditional flash cards. Cover up one of the numbers to see if your child can determine the missing number from the fact family. Practice writing related facts.



For additional activities, visit [www.ed.gov/pubs/parents/Math](http://www.ed.gov/pubs/parents/Math)