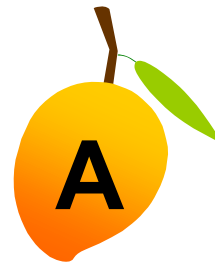


# GREAT EXPRESSIONS

## ALGEBRA



**OBJECTIVE:** Students will be given written expressions in which they will translate into algebraic expressions.

### SUPPLIES:

- ◆ Great Expression cards
- ◆ Score cards
- ◆ 20 sided dice

**APPROXIMATE TIME: 15 minutes**

### TEACHING TIPS:

Students will read cards and translate the statement into an algebraic expression. They will then roll a die to find the value of the variable and solve the expression. Solutions to the cards can be found below.

Vocabulary comprehension is very important to understanding how to read, write and solve algebraic equations and word problems. Review the math terms listed with the students so that they have an understanding of the vocabulary prior to playing the game.

**Expanding Game Ideas:** Have the students create their own Great Expression cards and add them to the deck.

### Card answers:

1)  $n + 10$ , 2)  $n + 18$ , 3)  $5(n - 12)$ , 4)  $-5(n + 14)$ , 5)  $3n$ ,  
6)  $n^2$  or  $n \times n$ , 7)  $25 - n$ , 8)  $n + 2$ , 9)  $n^2 + 2n - 4$ ,  
10)  $n/10$ , 11)  $(n + n)/2$  or  $2n/2$ , 12)  $2/3n$ , 13)  $5(n+4)$ ,  
14)  $8(20 - n)$ , 15)  $3n + 5$ , 16)  $n/2 \times 4$ , 17)  $2n + 8$ ,  
18)  $2x + (x + 3)$ , 19)  $2(30 + n)$ , 20)  $32 - n$ , 21)  $2n + 6$ ,  
22)  $n + 2n$ , 23)  $n + 12$ , 24)  $n^2$ , 25)  $2n - 5$ , 26)  $20n - 16$ ,  
27)  $n/2 + 9$ , 28)  $1/4n$ , 29)  $3/4n$ , 30)  $1/4n \times 4$ ,  
31)  $100 - 5n$ , 32)  $2n/n$

### Math Terms

**Coefficient**— A number which multiplies a variable. For example:  $2b$ , 2 is the coefficient.

**Variable**—varying quantity represented by a letter

**Algebraic expression**—contains at least one variable and may contain other numbers and/or operators, does not contain a  $=$ ,  $\neq$ ,  $>$  or  $<$ , can be one side of an equation.

**Equation**—a mathematical statement where the left side equals the right side.

**Sum** - the result of adding numbers together.

**Product** - result when two numbers are multiplied

**Quotient** - the number resulting from dividing one number by another

**Squared** - A result from multiplying a number by itself.

### ? GUIDED QUESTIONS:

- ◆ Were some problems easier to write than others? Why/Why not?
- ◆ What problems were more difficult to write?
- ◆ What is a coefficient?
- ◆ What is an algebraic expression?
- ◆ What is a variable?

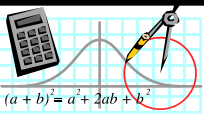


# GREAT EXPRESSIONS

## A Game for 2 to 4 Players

- 1 Players will need a deck of Great Expression cards, 20 sided die, and score card.
- 2 Players can work as a team or independently.
- 3 One player deals 3 cards to each player.
- 4 Players look at their three cards and select one card to pass to the player on the right.
- 5 The receiving player must use that card for the round.
- 6 Players will write the algebraic expression from the card on their score card.
- 7 One player will then roll the 20-sided die for the value of the variable.
- 8 All players will write that number into the expression on their score card and solve.
- 9 The answer to their expression is their score for that round.
- 10 Dealer gives everyone a new card to replace the one used in round. Old cards are put back into the deck.
- 11 Play continues for 5 rounds. Highest total score wins.

Option: Play again but low score wins



The difference between fifty and three times the cube of a number.



GREAT ALGEBRAIC EXPRESSION	# ROLLED	SOLUTION
$50 - 3n^3$	10	$50 - 3(10^3) = -2950$
TOTAL =		