

Remember how we evaluated numerical expressons
$$-3(-6+2)^{2} \qquad -6+10\cdot 3$$

$$-3(-4)^{2} \qquad -6+30$$

$$-3(/6) \qquad 24$$

Variables and Expressions			
Numerical Expressions		Algebraic Expressions	
3 + 7	8(3) - 2	x + y	2a - b
2 ³ + 1	<u>12</u> 6	x - 6	5a
		-9xy	ab
		,	y ³

Page 3

Page 4

Page 2

To evaluate an algebraic expression for a given value:

- *Copy problem
- *Substitute numbers for variables
- *Use the order of operations Show steps line by line *Circle final answer

Evaluate if
$$a = -3$$
 $b = 2$ $c = 5$

$$a + 4b - c$$

$$-3 + 4(2) - 5$$

$$-3 + 8 + 5$$

$$5 + 1$$

$$5 + 5$$

$$-30$$

$$6$$

$$-5$$

Page 5

Evaluate if	a = -2	b = 4	c = -5
2(a + c)		$3a^2 + b$	С
2(-2+	5)	3 (-2)2	
2 (-7)		3(4)+	+ 4(5)
(-14)		12+	-20
	1	<u>-8</u>	

Page 6

A variable is a symbol that represents an unknown quantity.

* It is important to DEFINE the variable you use so it is clear what it stands for For example:

Let w = the number of weeks

Let x =the length of the rectangle (in feet)

Let n = the number

Page 7

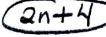
Writing Algebraic Expressions

A taxi charges \$4.00 plus \$3.00 for each mile. Write an algebraic expression that represents the cost an "m" mile trip.

7	10 miles	Let m = # miles
	10.3 +4	m.3+4
1	15 miles	3m+4
	15:3+4	4 + 3 m
_		

Write an algebraic expression for each of the following word phrases. Let n = the number.

1) four more than twice a number



2) six less than a number



3) the product of a number and seven



4) the quotient of a number squared and two



5) the difference of a number and three

n	-3	3

Page 11

LMS sold tickets for a school play. The price of an adult ticket was \$6, the price of a student ticket was \$4. Write an expression that represents the total amount of money collected.

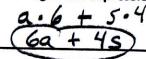
* Think...How would I figure the total cost for two adult tickets and five student tickets?

* What variables will I need to define to write an algebraic expression for any number of tickets?

Let a = # of adult

5 = # of students

* Write the algebraic expression asked for in the problem.



Page 10

The answer is	Write the question.
Write an algebraic expression with the variable x that has a value of ten when evaluated. Evaluate if x =	Write an algebraic expression with the following conditions: *variable n *a value of four when evaluated *two operations Evaluate if n =