Name _____ Date _____

The Value of an Expression

Example

For $x = 3$: $2x + 5 = 2 \times 3 + 5 = 11$

For $x = -2$: $x^2 - 3x = (-2)^2 - 3 \times (-2) = 4 + 6 = 10$

Remember

Replace the letter with the number, and put a negative number in **brackets**. $2x$ means $2 \times x$, and x^2 means $x \times x$ (not $2x$). Follow the order of operations: powers, then multiplication and division, then addition and subtraction.

1 ON YOUR OWN Work out the value of each expression.

	$x = 2$	$x = -1$	$x = 0$	$x = 3$
$3x - 4$				
$x^2 + 1$				
$2(x + 5)$				
$-x^2$				
$(x - 1)^2$				
$\frac{x + 3}{2}$				

2 IN PAIRS **Find the mistake.** Explain what is wrong and work it out correctly.

Ana: for $x = -3, x^2 = -9$. **true** / **false**

Correction: _____

Ivan: for $x = 3, 2x^2 = 36$. **true** / **false**

Correction: _____

Names (pair) _____ Date _____

3 ON YOUR OWN **Turn the words into an expression.**

In words	Expression
the sum of x and 7	
twice the number y	
3 less than a	
the square of the sum of a and b	
the sum of the squares of a and b	
half of the difference of m and n	

4 IN PAIRS **Students and teachers.** A school has 8 times as many students as teachers. Let s be the number of students and t the number of teachers. Which equation is right? Check with numbers, e.g. 10 teachers.

$8s = t$ $s = 8t$ → the right one is ____

Reason:

_____

_____

5 ON YOUR OWN **A rectangle** has sides a and b. Write expressions for its perimeter p and area A, then work them out for $a = 5$ cm and $b = 3$ cm.

$p =$ ____ $A =$ ____ → $p =$ ____ cm, $A =$ ____ cm²

★ ON YOUR OWN **Exit card.** The value of $3a - 2b$ for $a = 2$ and $b = -1$ is ____