

# MathFLIX CHALLENGE

## Substitution Principle: Part I

In math, a variable is a letter or symbol used to represent a number. Use the values given for the variables a, b, c and d in each set to evaluate each expression.

**1. If... ( a = 1    b = 2    c = 0    d = 100 )**

...then evaluate the expression...	... by substituting the given numbers...	...to find the sum.
$3ab + 3ac$	$(3 \times 1 \times 2) + (3 \times 1 \times 0)$	6
$3ab + 4ac$	$(3 \times \underline{\quad} \times \underline{\quad}) + (3 \times \underline{\quad} \times \underline{\quad})$	___
$3abc + 4bcd$	$(3 \times \underline{\quad} \times \underline{\quad} \times \underline{\quad}) + (3 \times \underline{\quad} \times \underline{\quad} \times \underline{\quad})$	___
$6abc + 8bcd$	_____	___
$30abc + 40bcd$	_____	___

**2. If... ( a = 2    b = 4    c = 0    d = 200 )**

...then evaluate the expression...	... by substituting the given numbers...	...to find the sum.
$3ab + 3ac$	$(3 \times 2 \times 4) + (3 \times 2 \times 0)$	24
$3ab + 4ac$	$(3 \times \underline{\quad} \times \underline{\quad}) + (3 \times \underline{\quad} \times \underline{\quad})$	___
$3abc + 4bcd$	$(3 \times \underline{\quad} \times \underline{\quad} \times \underline{\quad}) + (3 \times \underline{\quad} \times \underline{\quad} \times \underline{\quad})$	___
$6abc + 8bcd$	_____	___
$30abc + 40bcd$	_____	___

**3. If... ( a = 2    b = 3    c = 5    d = 200 )**

...then evaluate the expression...	... by substituting the given numbers...	...to find the sum.
$3ab + 3ac$	$(3 \times 2 \times 3) + (3 \times 2 \times 5)$	48
$3ab + 4ac$	$(3 \times \underline{\quad} \times \underline{\quad}) + (3 \times \underline{\quad} \times \underline{\quad})$	___
$3abc + 4bcd$	$(3 \times \underline{\quad} \times \underline{\quad} \times \underline{\quad}) + (3 \times \underline{\quad} \times \underline{\quad} \times \underline{\quad})$	___
$6abc + 8bcd$	_____	___
$30abc + 40bcd$	_____	___