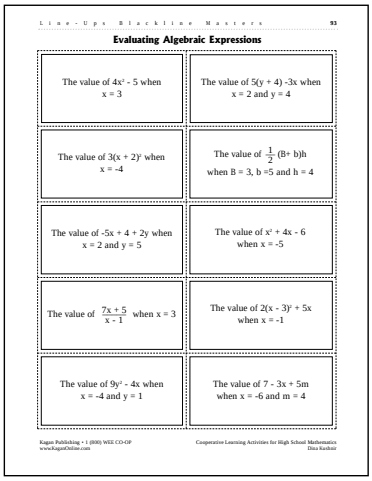
BLACKLINE MASTERS

Line-Ups

Algebra 1

Evaluating Algebraic Expressions



Line-Ups Blackline Masters 93

Evaluating Algebraic Expressions

The value of $4x^2 - 5$ when $x = 3$	The value of $5(y + 4) - 3x$ when $x = 2$ and $y = 4$
The value of $3(x + 2)^2$ when $x = -4$	The value of $\frac{1}{2}(B + b)h$ when $B = 3$, $b = 5$ and $h = 4$
The value of $-5x + 4 + 2y$ when $x = 2$ and $y = 5$	The value of $x^2 + 4x - 6$ when $x = -5$
The value of $\frac{7x + 5}{x - 1}$ when $x = 3$	The value of $2(x - 3)^2 + 5x$ when $x = -1$
The value of $9y^2 - 4x$ when $x = -4$ and $y = 1$	The value of $7 - 3x + 5m$ when $x = -6$ and $m = 4$

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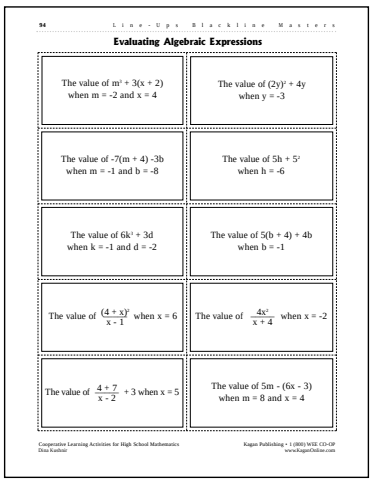
Cooperative Learning Activities for High School Mathematics
Dina Kushnir



94 Line-Ups Blackline Masters

Evaluating Algebraic Expressions

The value of $m^2 + 3(x + 2)$ when $m = -2$ and $x = 4$	The value of $(2y)^2 + 4y$ when $y = -3$
The value of $-7(m + 4) - 3b$ when $m = -1$ and $b = -8$	The value of $5h + 5^2$ when $h = -6$
The value of $6k^3 + 3d$ when $k = -1$ and $d = -2$	The value of $5(b + 4) + 4b$ when $b = -1$
The value of $\frac{(4 + x)^2}{x - 1}$ when $x = 6$	The value of $\frac{4x^2}{x + 4}$ when $x = -2$
The value of $\frac{4 + 7}{x - 2} + 3$ when $x = 5$	The value of $5m - (6x - 3)$ when $m = 8$ and $x = 4$

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OBJECTIVES

Students will evaluate algebraic expressions by using substitution.

MATERIALS

Scratch paper, pencils, Line-Up cards (see following pages)

PREREQUISITE LEARNING

Students should be able to perform operations on integers according to the correct order of operations

FOLLOW-UP QUESTIONS

How could you adjust the algebraic expression on your card so that the resulting value would be 2? Can you come up with two or three different ways to do this?

Let x = 4 and y = -3. Write three different algebraic expressions using x and/or y which are worth -1.

The above questions can be posed to the whole class, and students can then discuss their answers with a partner next to them. Students can then report out to the class regarding their partner's answer, or write their answer down on paper to hand in.

POSSIBLE EXTENSIONS

Students can make up their own Line-Up cards with an algebraic expression and a given list of variables. Do another Line-Up using the student-made cards.

Evaluating Algebraic Expressions

The value of $4x^2 - 5$ when $x = 3$	The value of $5(y + 4) - 3x$ when $x = 2$ and $y = 4$
The value of $3(x + 2)^2$ when $x = -4$	The value of $\frac{1}{2}(B+ b)h$ when $B = 3$, $b = 5$ and $h = 4$
The value of $-5x + 4 + 2y$ when $x = 2$ and $y = 5$	The value of $x^2 + 4x - 6$ when $x = -5$
The value of $\frac{7x + 5}{x - 1}$ when $x = 3$	The value of $2(x - 3)^2 + 5x$ when $x = -1$
The value of $9y^2 - 4x$ when $x = -4$ and $y = 1$	The value of $7 - 3x + 5m$ when $x = -6$ and $m = 4$

Evaluating Algebraic Expressions

The value of $m^3 + 3(x + 2)$ when $m = -2$ and $x = 4$	The value of $(2y)^2 + 4y$ when $y = -3$
The value of $-7(m + 4) - 3b$ when $m = -1$ and $b = -8$	The value of $5h + 5^2$ when $h = -6$
The value of $6k^3 + 3d$ when $k = -1$ and $d = -2$	The value of $5(b + 4) + 4b$ when $b = -1$
The value of $\frac{(4 + x)^2}{x - 1}$ when $x = 6$	The value of $\frac{4x^2}{x + 4}$ when $x = -2$
The value of $\frac{4 + 7}{x - 2} + 3$ when $x = 5$	The value of $5m - (6x - 3)$ when $m = 8$ and $x = 4$

Evaluating Algebraic Expressions

The value of $3(x - 2)^3 + x$ when $x = 4$	The value of $-5y^3 + 6k$ when $y = -2$ and $k = 1$
The value of $5(x - 3) \div 2 + 3m$ when $x = 9$ and $m = -2$	The value of $6(h - 3)^2 + 5v$ when $v = -5$ and $h = 6$
The value of $8c + \frac{x - 2}{3}$ when $c = 4$ and $x = 20$	The value of $\frac{5x^2 + m^0}{2}$ when $x = -3$ and $m = 6$
The value of $\frac{1}{3}(2x)^2$ when $x = 6$	The value of $6(f - r^3)$ when $f = 1$ and $r = -2$
The value of $6h \div (x - 4) + 5$ when $h = 3$ and $x = 6$	Find the value of $-x^3 + 2y$ when $x = -2$ and $y = 5$