

Algebra/Data Analysis Toolkit: Indicator 1.1.3

Student Handout: Algebra/Data Analysis: Indicator 1.1.3

Goal 1.0 Functions and Algebra

Expectation 1.1 The student will analyze a wide variety of patterns and functional relationships using the language of mathematics and appropriate technology.

Indicator 1.1.3 The student will apply addition, subtraction, multiplication, and/or division of algebraic expressions to mathematical and real-world problems.

Assessment Limits:

The algebraic expression is a polynomial in one variable.

The polynomial is not simplified.

Public Release - Selected Response Item - Released in 2009

Algebra/Data Analysis Indicator 1.1.3

The width and length, in feet, of a rectangular playground are x and $x + 2$. A fence costs \$17 per foot. Which of these expressions represents the cost, in dollars, to build a fence around this rectangular playground?

- A. $17x(x + 2)$
- B. $17 + x + (x + 2)$
- C. $17[x + (x + 2)]$
- D. $17[x + (x + 2) + x + (x + 2)]$

Correct Answer

- D. $17[x + (x + 2) + x + (x + 2)]$

Item

The width and length, in feet, of a rectangular playground are x and $x + 2$. A fence costs \$17 per foot. Which of these expressions represents the cost, in dollars, to build a fence around this rectangular playground?

- A. $17x(x + 2)$
- B. $17 + x + (x + 2)$
- C. $17[x + (x + 2)]$
- D. $17[x + (x + 2) + x + (x + 2)]$