

**Grade 6 Accelerated
Day 1**

Standard	7.EE.2 Recognize that algebraic expressions may have a variety of equivalent forms and determine an appropriate form for a given real-world situation.
Learning Targets I Can Statements	I can write algebraic expressions and their equivalent forms to represent real-world situations.
Essential Question(s)	How can writing and identifying equivalent forms of algebraic expressions assist with understanding real-world situations.
Resources	No additional resources needed. However, all answers should be written on a separate sheet of paper.
Learning Activities or Experiences	<ol style="list-style-type: none">1. Complete at least 3 topics of your ALEKS pathway. (if available)2. Review attached notes and complete the practice problems.3. Complete the exercises titled "You Try It".4. Complete the "Today's Thought" activity.

NOTE: For additional practice aligned to your grade for SC READY review please refer to the 6th grade level assignments.

Algebraic Expressions Lesson Notes

What is an algebraic expressions?

An **algebraic expression** is a combination of integer constants, variables, exponents and **algebraic** operations such as addition, subtraction, multiplication and division. $5x$, $x + y$, $x - 3$ and more are **examples** of **algebraic expression**. ... A variable is a letter used to represent an unknown value.

There are a variety of ways to write an algebraic expression to represent a given situation in mathematics. Let's take a look at an example.

Alvin wants to take his two sons to the carnival that's in town this weekend.

Admission for each adult is \$7 and children pay \$5 to get in.

All rides cost \$2 no matter your age.

Help Alvin to write an expression he can use to figure out his total cost once the kids decide how many rides they want to get on. Let "r" represent number of rides.

Expression #1: $\$7 + \$5(2) + \$2r$

Expression #2: $\$7 + \$10 + \$2r$

Expression #3: $\$17 + 2r$

Here are three examples of ways you represent this situation mathematically.

All expression are correct because they are equivalent.

You Try It

It is school supply time and Marie is almost finished with her supply list. The only items left to get are ink pens and notebook paper. So she notices that one teacher like for students to write on wide-rule paper and the other wants college-rule paper. They both want her to have four packs of paper each. The wide rule is on sale for \$.75 and the college rule cost \$1.25. Marie has \$10 remaining to spend. Help her to write an expression to figure out how much she has to spend on the ink pens.

First Expression:

Equivalent Expression:

Stretch Your Thinking: *How much can Marie spend on her ink pens?*

Today's Thought

1. A teacher goes to an office supply store and purchases 3 packs of red markers, 5 packs of black markers, and 4 packs of blue markers. The cost of each pack of markers is \$1.70. The expression $1.70 \times 3 + 1.70 \times 4$ represents the total amount of money the teacher spends on markers. **Which is another way the teacher spends on markers?**
 - a. $1.70 + 3 + 5 + 4$
 - b. $1.70 \times 3 \times 5 \times 4$
 - c. $1.70 + (3 \times 5 \times 4)$
 - d. $1.70 \times (3 + 5 + 4)$
2. Eva takes a taxi to and from work. The taxi charges a flat rate of \$2.60 and \$1.20 for each mile. Eva gives her friend, who lives d miles away from her work, a ride home in the taxi. Evan then travels m miles more in the taxi before reaching her home. **Which statement is true about the amount Eva pays for the taxi?**
 - a. Eva pays $1.20(m - d) + 2.60$ dollars, which is equivalent to $1.20m - 1.20d + 2.60$.
 - b. Eva pays $1.20(m + d) + 2.60$ dollars, which is equivalent to $1.20m + 1.20d + 2.60$.
 - c. Eva pays $1.20(m - d) + 2.60$ dollars, which is equivalent to $1.20m - d + 2.60$.
 - d. Eva pays $1.20(m + d) + 2.60$ dollars, which is equivalent to $1.20m + d + 2.60$.
3. A teacher writes the scenario on the board.

Amber sells bags at 20% more than the price that it costs her to make them.

The teacher asks four students to write an expression representing the price at which Amber sells a bag that costs her \$ c to make. The table shows the students' responses. Which student(s) is (are) correct?

Student	Response
Charlie	$c + 0.2c$
Deborah	$c - 0.2c$
Rosario	$1.2c$
Vincent	$0.98c$

- a. Only Charlie
 - b. Only Deborah
 - c. Both Charlie and Rosario
 - d. Both Deborah and Vincent
4. Craig and Madison spend d dollars on dinner and then tip the server 18%. Which expressions represent the total cost of Craig and Madison's dinner? Select *ALL* that apply.
 - a. $0.82d$
 - b. $1.18d$
 - c. $d + 0.18$
 - d. $d + 0.18d$
 - e. $d + 1.18$