Lesson 7: Unit Rate as the Constant of Proportionality

Problem Set

For each of the following problems, define the constant of proportionality to answer the follow-up question.

1. Bananas are $\$0.59$/pound.
	1. What is the constant of proportionality, or $k$?
	2. How much will $25$ pounds of bananas cost?
2. The dry cleaning fee for $3$ pairs of pants is $\$18$.
	1. What is the constant of proportionality?
	2. How much will the dry cleaner charge for $11$ pairs of pants?
3. For every $\$5$ that Micah saves, his parents give him $\$10$.
	1. What is the constant of proportionality?
	2. If Micah saves $\$150$, how much money will his parents give him?
4. Each school year, the seventh graders who study Life Science participate in a special field trip to the city zoo. In $2010$, the school paid $\$1,260$ for $84$ students to enter the zoo. In $2011$, the school paid $\$1,050$ for $70$ students to enter the zoo. In $2012$, the school paid $\$1,395$ for $93$ students to enter the zoo.
	1. Is the price the school pays each year in entrance fees proportional to the number of students entering the zoo?
	2. Explain why or why not.
	3. Identify the constant of proportionality, and explain what it means in the context of this situation.
	4. What would the school pay if $120$ students entered the zoo?
	5. How many students would enter the zoo if the school paid $\$1,425$?