



Solutions in Context

Let's use equations to describe situations.

4.1

Notice and Wonder: Equations

What do you notice? What do you wonder?

- $2x + 3y = 12$
- $(0, 4)$ and $(6, 0)$

4.2

Raffles and Pins

1. For a fundraiser, a school club is selling raffle tickets for \$2 each and school logo pins for \$1.50 each. What is the cost of:
 - 3 tickets?
 - 5 tickets?
 - x tickets?
 - 2 pins?
 - 6 pins?
 - y pins?
 - 10 tickets and 8 pins?
 - 7 tickets and 5 pins?
 - x tickets and y pins?
2. Lin bought some tickets and some pins, and paid \$22.
 - Write an equation representing this situation.
 - What are some combinations of tickets and pins that Lin might have bought?



4.3

Row Game: Solving Equations

Partner A completes only column A, and partner B completes only column B. Your answers for each problem should match. Work on one problem at a time, and check whether your answer matches your partner's before moving on. If you don't get the same answer, work together to find your mistake.

Column A:

- Lin's teacher has a daughter that is $\frac{1}{3}$ of his age. Write an expression to represent the daughter's age. Let z represent the teacher's age, in years.
- Han wants to save \$40. He hasn't met his goal yet. Write an expression to represent how far Han is from his goal, in dollars. Let q represent the amount of money, in dollars, he's saved so far.
- Priya has some money to spend at a fair. It costs \$6 to get in and \$0.50 per ride ticket. Write an expression to represent how much Priya spends at the fair, in dollars. Let x represent the number of ride tickets Priya buys.
- Diego is inviting some friends over to clean their treehouse. He is buying soap and window cleaner. Soap costs 6 cents per ounce and window cleaner costs 17 cents per ounce. Write an expression to represent the total cost of soap and window cleaner, in cents. Let j represent how many ounces of soap Diego buys and k represent how many ounces of window cleaner he buys.

Column B:

- Jada leaves the beach with some seashells. One out of every three of the shells turns out to contain a hermit crab. Write an expression to represent the number of hermit crabs Jada found. Let z represent the total number of seashells she collected.
- Tyler started the school year with 40 pencils, but he's lost some. Write an expression to represent how many pencils Tyler has left. Let q represent the number of pencils he's lost so far.
- When Clare bought her plant, it was 6 inches tall. Each week, it's been growing $\frac{1}{2}$ of an inch. Write an expression to represent how tall Clare's plant is, in inches. Let x represent the number of weeks since Clare bought her plant.
- Mai is packing care packages. She is putting in boxes of candles that weigh 6 ounces each and paperback books that weigh 17 ounces each. Write an expression to represent the total weight of a care package, in ounces. Let j represent the number of boxes of candles and k represent the number of books.

