

Off the Line

Let's study solutions and non-solutions.

15.1 Estimate: Coin Weight



How much does a nickel weigh?

1. Record an estimate that is:

| too low | about right | too high |
|---------|-------------|----------|
| | | |

2. Explain your reasoning.

15.2

Row Game: Equations

Work independently on your column. Partner A completes the questions in column A only and partner B completes the questions in column B only. Your answers in each row should match. Work on one row 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 any mistakes.

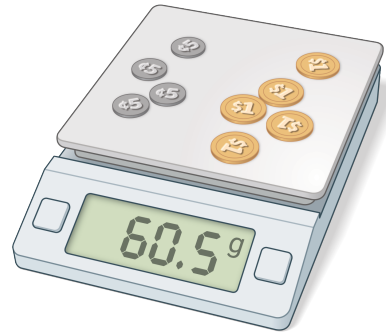
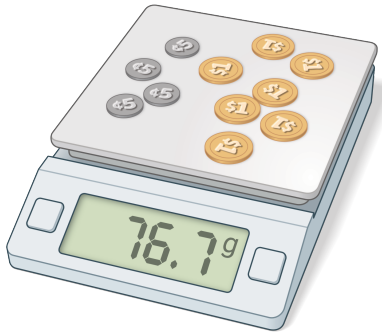
Solve each equation for x .

| row | column A | column B |
|-----|-------------------------|-------------------------|
| 1 | $3x - 1 = 5$ | $6x - 2 = 10$ |
| 2 | $4(x + 1) = 3x - 12$ | $4x + 4 = 3(x - 4)$ |
| 3 | $14x + 10 = 4x + 6$ | $7x + 5 = 2x + 3$ |
| 4 | $6x + 3 = 33$ | $4x + 2 = 22$ |
| 5 | $4x + 5y = 2 - 4x + 5y$ | $4x + 9y = 2 + 9y - 4x$ |
| 6 | $2x + 6y = 10$ | $5x + 15y = 25$ |

15.3

What Were They Thinking?

Read each student's reasoning, and answer the questions.




Jada says, "I know 4 nickels and 7 dollar coins weigh 76.7 grams. I know 4 nickels and 5 dollar coins weigh 60.5 grams. Here's what else I can figure out based on that:

- 2 dollar coins weigh 16.2 grams.
- 1 dollar coin weighs 8.1 grams.
- 5 dollar coins weigh 40.5 grams.
- 4 nickels weigh 20 grams.
- 1 nickel weighs 5 grams."

1. How did Jada figure out that 2 dollar coins weigh 16.2 grams?
2. Why might Jada have done that step first?
3. After Jada figured out how much 1 dollar coin weighed, why did she calculate how much 5 dollar coins weighed?
4. Once Jada knew how much 5 dollar coins weighed, how did she figure out how much 4 nickels weighed?



- The weight of 18 plastic bricks and 6 number cubes is 78 grams.
- The weight of 11 plastic bricks is 27.5 grams.
- The weight of 1 plastic brick is 2.5 grams.
- The weight of 9 plastic bricks is 22.5 grams.
- The weight of 3 number cubes is 16.5 grams.
- The weight of 1 number cube is 5.5 grams."

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 Extra Support Materials for Algebra 1 Unit 2
 ● Lesson 15
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