

# Solving Multistep Multiplication Number Stories

## Lesson 4-12

DATE

TIME



Write estimates and number models for each problem. Then solve.

- 1 Danielle and Hector are selling raffle tickets to raise money for the school band. Danielle sells 5 tickets per day for 4 weeks straight. She then sells 4 tickets per day for 1 week. How many tickets does Hector need to sell if he wants to sell more tickets than Danielle?

Estimate:

$$\text{Sample answer: } 40 * 4 = 160;$$

$$160 + 30 = 190 \text{ tickets}$$

Number models with unknowns:

$$\text{Sample answer: } (5 * 7) * 4 = x; (4 * 7) * 1 = w;$$

$$140 + 28 = t$$

Answer: More than 168 tickets

Does your answer make sense? Explain. **Sample answer:** Yes. I rounded up the number of tickets per week (35 to 40 and 28 to 30) to make sure my answer was more tickets than Danielle sold. So, my estimate is a bit higher than my answer.

- 2 Aliya buys 4 cartons of eggs each month. Each carton contains one dozen eggs. How many eggs does Aliya buy in two years?

Estimate:

$$\text{Sample answer: } 4 * 10 * 10 = 400;$$

$$400 + 400 = 800$$

Number models with unknowns:

$$\text{Sample answer: } (4 * 12) * 12 = y; 576 + 576 = e$$

Answer: 1,152 eggs

Does your answer make sense? Explain.

**Sample answer:** Yes. My estimate is less than my answer because I rounded down from 12 to 10 twice.

# Solving Multistep Multiplication Number Stories (continued)

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- 3 Antwan played goalie on both the soccer and hockey teams at school. When he played soccer, he saved 3 goals per day for 6 weeks. When he played hockey, he saved 2 goals per day for 3 weeks. How many goals did he save in all?

Estimate:

$$\text{Sample answer: } 20 * 6 = 120;$$

$$10 * 3 = 30; 120 + 30 = 150 \text{ goals}$$

Number models with unknowns:

$$\text{Sample answer: } (3 * 7) * 6 = s;$$

$$(2 * 7) * 3 = h; 126 + 42 = g$$

Answer: 168 goals

Does your answer make sense? Explain.

Sample answer: Yes. I rounded 21 goals a week to 20 goals and 14 goals a week to 10 goals, so my estimate is close.

- 4 Pablo buys 18 new songs each month. Each song costs \$2. How much money does Pablo spend on songs in 3 years?

Estimate:

$$\text{Sample answer: } 20 * 2 * 10 = 400;$$

$$400 + 400 + 400 = \$1,200$$

Number models with unknowns:

$$\text{Sample answer: } (18 * 2) * 12 = s;$$

$$432 + 432 + 432 = p$$

Answer: \$ 1,296

Does your answer make sense? Explain.

Sample answer: Yes. I rounded a couple of numbers in my estimate, so it makes sense that it would be a little different from my answer.