Lesson 21: Solve Problems Using the Four Operations

- Let's represent and solve problems using all four operations.

Warm-up: Notice and Wonder: Apples Again

What do you notice? What do you wonder?

A farmer picked some apples.
Some of the apples are packed into boxes and some are not.

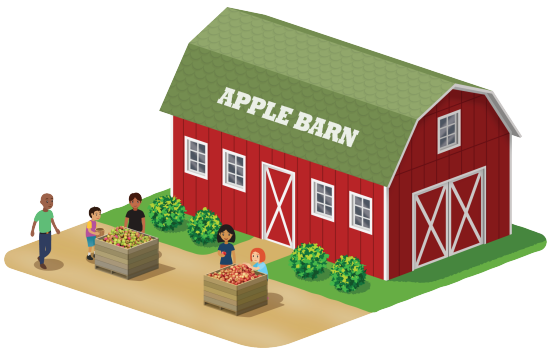
21.1: Apple Adventure

A farmer picked some apples. Some of the apples are packed into boxes and some are not.

From the list, choose 4 numbers that would make sense together in this situation. Write your choices in the table. Be ready to explain how your numbers make sense together.

400	300	240	12
350	290	230	10
340	280	170	5

total number of apples	number of apples not in boxes	number of boxes	number of apples in each box



21.2: Apple Days

Tyler and Clare are helping with a festival at an apple orchard.

1. Tyler is stacking apples to sell at the event. There are 85 apples for his display. He has already made 5 rows of 10 apples. How many apples are left?

    a. Write an equation with a letter for the unknown quantity to represent this situation.

    b. Solve the problem. Explain or show your reasoning.

2. Clare is helping sell baked goods at the event. A customer buys 8 brownies that cost $3 each. Clare adds that money to the cash box and now there is $125 in the cash box. How much money was in the cash box before that purchase?

    a. Write an equation with a letter for the unknown quantity to represent this situation.

    b. Solve the problem. Explain or show your reasoning.

3. The market at the orchard had 200 jars of applesauce for sale. At the end of the event, 184 jars had been sold. The rest of the jars were shared equally among 4 people who work there. How many jars of applesauce did each person get?

   a. Write an equation with a letter for the unknown quantity to represent this situation.

   b. Solve the problem. Explain or show your reasoning.

Section Summary

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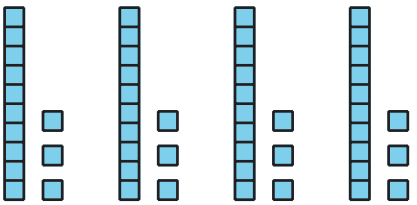
In this section, we divided larger numbers and solved problems that involve division.

We used base-ten blocks, diagrams, and equations to represent the numbers we divided. To help us divide, we used what we know about place value, equal groups, and the relationship between multiplication and division.

For example, here are some ways we could find the value of $52 \div 4$:

- Put 5 tens and 2 ones into 4 equal groups.



- Think about how many groups of 4 are in 52.

10 groups of 4 make 40.
3 groups of 4 make 12.
13 groups of 4 make 52.

- Use multiplication facts and write equations.

$$4 \times 10 = 40$$
$$4 \times 3 = 12$$

$$10 + 3 = 13$$
$$4 \times 13 = 52$$

At the end of the section, we used all four operations to solve problems.