

On Your Own ■ ■ ■

1. As a brickmason's apprentice, you need to move the correct number of bricks. The mason needs enough bricks to lay the next 4 rows. Each row is 24 bricks long. How many bricks do you need to move to complete the four rows?

- A. 6
- B. 20
- C. 28
- D. 96
- E. 120

2. One of your responsibilities as a line cook is to make sandwiches during lunch hour. People have ordered three types of sandwiches. Each sandwich is served with a slice of cheese. There are 28 orders for ham sandwiches, 14 orders for tuna sandwiches, and 30 orders for chicken sandwiches. How many slices of cheese do you need to make all of the sandwich orders?

- F. 42
- G. 54
- H. 62
- J. 72
- K. 78

3. You are a technician in a biology lab. You need to separate mice into equal groups. There are 84 mice altogether. You are instructed to place 12 mice in each cage. How many cages do you need?

- A. 6
- B. 7
- C. 72
- D. 96
- E. 1,008

4. As a janitorial supervisor, part of your job is to keep track of cleaning supplies. Yesterday you had 105 gallons of floor wax. The overnight crew used 15 gallons last night. How much floor wax is left?

- F. 7 gallons
- G. 80 gallons
- H. 85 gallons
- J. 90 gallons
- K. 120 gallons

5. At the hotel where you are a clerk at the front desk, there are 260 rooms. They are all reserved. The tracking sheet shows that guests have checked into 146 of the rooms. How many more guests do you expect?

- A. 14
- B. 96
- C. 114
- D. 124
- E. 406

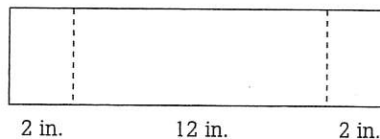
6. You are a cabinetmaker who is installing new kitchen cabinets. You need 6 screws for each cabinet door. How many screws will you need to install 20 cabinet doors?

- F. 24
- G. 120
- H. 144
- J. 240
- K. 2,400

7. As a manager for a construction company, you are currently supervising workers at four sites. You plan to spend the same amount of time at each site. You will spend 196 hours supervising sites during the next few weeks. How many hours will you work at each site?

- A. 10
- B. 16
- C. 40
- D. 49
- E. 98

8. You are a stonecutter. A mason orders capstones for a wall. The wall is 12 inches wide. The capstones extend an extra 2 inches on each side of the wall. To what width should you cut the capstones?



- F. 12 inches
- G. 14 inches
- H. 16 inches
- J. 20 inches
- K. 24 inches

Lesson 1 pp. 2-7

Solve Problems with Math Operations

Skill: Solve problems with single math operations using whole numbers

Foundational Skills

- Add, subtract, multiply, and divide whole numbers

Build Background Jobs in almost every field require an understanding of the basic math operations of addition, subtraction, multiplication, and division. Workplace tasks such as taking inventory, making schedules, and dealing with money or budgets all require the use of math operations and the ability to know which operation to use in specific situations.

Skill Examples Have students identify the operation used in each example. You may wish to show additional examples involving multiplication and division.

Skill Practice (Answers: A. 43; B. 108; C. 120; D. 8) Help students identify which operation they will perform to solve each problem. Make sure students understand the steps for regrouping, or carrying, as they calculate.

Try It Out!

Step 1 Confirm that students understand the question. Remind them to look for key words to help them decide which operation to use.

Step 2 Tell students to review their understanding of the question and their plan for solving the problem. Make sure students use the inverse operation (subtraction) to check their answer. Emphasize the importance of reviewing all answer choices to determine whether the answer they have selected is the best possible option.

On Your Own

Review the *Problem Solving Tip* on p. 3. **Answers:**

1. D 3. B 5. C 7. D 9. E 11. B 13. D 15. C
2. J 4. J 6. G 8. H 10. G 12. J 14. J 16. G

ELL Strategy

Elaborate on Concepts There are several key words that can indicate which operation is required. Be sure students are familiar with these key words and which operation the words indicate. Encourage them to make a chart or list for each operation.

Operation/Symbol	Key Words
Addition (+)	sum, total, both, combined
Subtraction (-)	less than, left, remain, minus, difference, reduce
Multiplication (×)	product, times, twice
Division (÷)	split/share, evenly, equally, average, quotient

Lesson 2 pp. 8-13

Convert Money and Time

Skill: Convert simple money and time units

Foundational Skills

- Understand decimal place value
- Add and subtract decimals
- Add and subtract time

Build Background Money and time are important factors in almost every job. Many workplace tasks involve converting between dollars and cents or between hours and minutes. Filling out a time card and estimating the amount of time a task will take involve working with time. Making payments and receiving payments involve working with money.

Skill Examples Have students study the conversion charts on p. 8. Explain that money amounts involving change are usually written using decimals, but that time rarely is. Show students examples of time written as an amount of hours and minutes, such as 2 hours, 5 minutes, and as a specific time, such as 5:45 P.M.

Skill Practice (Answers: A. \$1.65; B. \$1.50; C. 135; D. 1, 40) Make sure students line up numbers by place value before they add or subtract. Remind them to regroup decimals in the same way that they regroup whole numbers. Have students use a clock or watch to help them if they struggle with time conversion.

Try It Out!

Step 1 Confirm that students understand the question. Remind them that they should use the conversion 60 minutes = 1 hour and that adding time is different from adding whole numbers and decimals.

Step 2 Tell students to review their understanding of the question and their plan for solving the problem. Emphasize the importance of reviewing all answer choices in order to determine whether the answer they have selected is the best possible option.

On Your Own

Review the *Problem Solving Tip* on p. 9. **Answers:**

1. E 3. D 5. C 7. B 9. D 11. C 13. C 15. C
2. H 4. J 6. J 8. G 10. G 12. J 14. J 16. H

Extend Contextual Learning

Manufacturing Manufacturing jobs often require workers to calculate start and finish times for each step of the production process. This helps determine estimated production levels within a given period. Review item 7 of the *On Your Own* section to identify a career in which workers must use this skill.

Education & Training Careers in education may involve keeping track of time. Working within the schedule of the school day, teachers and school administrators must be aware of the length of time of each lesson, recess break, and lunch period. Teachers must also budget their time to cover a certain amount of material in one lesson period.