

Welcome to *Fourth Grade Everyday Mathematics*

Lesson 1-1

DATE

TIME

Much of your work in Kindergarten through third grade involved understanding mathematics and its uses. You learned to solve number stories and use arithmetic, including basic facts in addition, subtraction, multiplication, and division.

Fourth Grade Everyday Mathematics builds on this experience, introducing more complex mathematical concepts and ways to use math in your everyday life.

Here are some things you will be asked to do in *Fourth Grade Everyday Mathematics*:

- Increase your “number sense,” “measurement sense,” and estimation skills.
- Extend your skills with addition, subtraction, multiplication, and division of whole numbers.
- Find equivalent fractions.
- Use your understanding of whole number operations to add and subtract fractions and multiply a fraction by a whole number.
- Learn about using letters to stand for unknown numbers and other beginning algebra concepts so you can write algebraic equations.
- Increase your understanding of measurement in both the metric and U.S. customary systems.
- Expand your ability to collect, organize, and interpret data.
- Develop your skills with 2-dimensional geometry, working with angles, classifying polygons, and investigating symmetry.

We hope that you find the activities fun and that you begin to see the beauty in mathematics. More importantly, we hope you become better at using mathematics to solve interesting problems in your own life.

Finding the Values of Digits

Lesson 1-1

DATE

TIME

SRB
78-79

Use a place-value tool to solve.

- 1 In 9,027, what is the value of the . . .

9? _____

0? _____

2? _____

- 2 In 82,075, what is the value of the . . .

8? _____

2? _____

5? _____

- 3 a. The value of 1 in 10 is _____
times as large as the digit 1.

- b. The value of 5 in 500 is _____
times as large as the value of the
5 in 50.

- 4 a. The value of 4 in 400 is _____
times as large as the value of 4 in 40.

- b. The value of 9 in 9,000 is
_____ times as large as the
value of 9 in 900.

- 5 a. Write a number in which the digit 7 is worth 70. _____

- b. Write a new number in which the digit 7 is worth 10 times
as much as the number you just wrote. _____

- 6 Write the number that has . . .

3 in the ten-thousands place

4 in the ones place

2 in the thousands place

6 in the hundreds place

0 in the remaining place

_____, _____

- 7 Write the number that has . . .

8 in the hundreds place

6 in the hundred-thousands place

3 in the tens place

1 in the ten-thousands place

7 in the ones place

0 in the remaining place

_____, _____

Try This

- 8 Write the number name for 5,622,463. _____

1 Add mentally.

a. $8 + 5 =$ _____

b. $80 + 50 =$ _____

c. $7 + 7 =$ _____

d. $70 + 70 =$ _____

e. $6 + 9 =$ _____

f. $60 + 90 =$ _____

2 Fill in the missing numbers and state the rule.

a. 2, 4, 6, 8, _____, _____

Rule: + 2

b. 65, 60, 55, _____, _____, _____

Rule: _____

c. 109, 95, 81, _____, _____, _____

Rule: _____

3 What is the value of the digit 5 in 560?

500

What is the value of the digit 7 in the numbers below? Use a place-value tool.

a. 475 _____

b. 7,058 _____

c. 9,947 _____

d. 68,071 _____



4 What number is halfway between 300 and 600? Fill in the circle next to the best answer.

(A) 550

(B) 450

(C) 525

(D) 400

5 **Writing/Reasoning** Round 475 to the nearest ten. _____

Explain how you rounded the number.



Hockey Game Attendance

Lesson 1-2

DATE

TIME

SRB

81

Write $<$ or $>$.

① 508 _____ 588

② 2,675 _____ 3,675

③ 1,833 _____ 1,933

④ 57,883 _____ 56,838

This table shows the total attendance for the 2013–2014 regular season for ten National Hockey League (NHL) teams.

NHL Team	2013–2014 Regular Season Total Attendance
Buffalo	761,767
Carolina	634,832
Chicago	927,545
Detroit	908,131
Minnesota	758,729
Montreal	872,193
Philadelphia	813,411
Pittsburgh	763,344
Tampa Bay	763,096
Vancouver	810,594

Source: www.espn.go.com/nhl/attendance

⑤ Which team had the largest total attendance? _____

Which team had the smallest total attendance? _____

⑥ Compare the attendance for Philadelphia and Minnesota.

a. Which team had the greater attendance? _____

How do you know?

b. Write a comparison number sentence. _____

⑦ Compare the attendance for Vancouver and Montreal.

a. Which team had the greater attendance? _____

How do you know? _____

b. Write a comparison number sentence. _____

Hockey Game Attendance (continued)

Lesson 1-2

DATE

TIME

8 Compare the attendance for Pittsburgh and Tampa Bay.

a. Which team had the smaller attendance? _____ How do you know?

b. Explain how you compared the numbers. _____

c. Write a comparison number sentence. _____

9 List the teams in order from greatest to least attendance.

NHL Team	2013-2014 Regular Season Total Attendance

- 1 Subtract mentally.
- $7 - 4 =$ _____
 - $70 - 40 =$ _____
 - $14 - 5 =$ _____
 - $140 - 50 =$ _____
 - _____ $= 16 - 7$
 - _____ $= 160 - 70$

- 2
- Write the largest number you can make with the digits 5, 2, 3, 0, 6, 0. Use each digit only once.

- Use the same digits to write the smallest number you can make. Do not start with 0.

 SRB
78-79

- 3 Write $>$, $<$, or $=$ to make each number sentence true.
- $45 + 10$ _____ $55 - 10$
 - 387 _____ $300 + 87$
 - 4 thousand _____ 4,502
 - $8,000 + 3,000 + 400$ _____ $8,400$

- 4 What is another name for 40? Circle the best answer.

- $5 * 80$
- $20 + 20 + 20$
- $8 * 5$
- $50 - 20$

 SRB
81

- 5 Add.

a.

$$\begin{array}{r} 432 \\ + 735 \\ \hline \end{array}$$

b.

$$\begin{array}{r} 938 \\ + 366 \\ \hline \end{array}$$

- 6 Write the number forty-seven thousand, three hundred ninety-two in standard form.

What is the value of the 4?

 SRB
80

Rounding

Lesson 1-3

DATE _____

TIME _____

Complete the number lines, plot the numbers on the number lines, and then use them to help you round the numbers.



- 1 Round 4,698 to the nearest thousand. Rounded number _____



lower number

halfway number

higher number

- 2 Round 5,778 to the nearest ten. Rounded number _____



5,770

lower number

halfway number

higher number

- 3 Round 2,304 to the nearest ten. Rounded number _____



lower number

halfway number

higher number

- 4 Round to the nearest hundred-thousand.

a. 271,009 _____ b. 809,050 _____ c. 282,582 _____

d. 450,076 _____ e. 723,670 _____ f. 596,207 _____

- 5 Round to the nearest ten-thousand.

a. 48,300 _____ b. 97,042 _____ c. 19,203 _____

d. 170,500 _____ e. 124,897 _____ f. 209,800 _____

- 6 Round to the nearest thousand.

a. 1,200 _____ b. 7,500 _____ c. 2,582 _____

d. 88,888 _____ e. 13,004 _____ f. 19,652 _____

Try This

- 7 When Claude rounded 49,540 to the nearest thousand, his result was 41,000. Is Claude correct? If not, what should he have done?

1 Add mentally.

- a. $3 + 3 =$ _____
- b. $30 + 30 =$ _____
- c. $5 + 6 =$ _____
- d. $50 + 60 =$ _____
- e. $4 + 7 =$ _____
- f. $40 + 70 =$ _____

2 Fill in the missing numbers and state the rule.

- a. 4, 8, 12, 16, _____, _____, _____
Rule: _____
- b. 33, 30, 27, _____, _____, _____
Rule: _____
- c. _____, _____, _____, 106, 141, 176
Rule: _____

3 Use a place-value tool to help you determine the value of the digit 8 in the numbers below.

- a. 7,5**8**4 _____
- b. **38**,067 _____
- c. 49,**8**41 _____
- d. **8**20,731 _____
- e. 391,**468** _____



4 Complete.

- a. Is 63 closer to 60 or 70? _____
- b. What number is halfway between 80 and 90? _____
- c. Is 572 closer to 500 or 600? _____
- d. What number is halfway between 500 and 800? _____

5 **Writing/Reasoning** Explain how the value of the digit 5 in the number 5,555 changes as you move from right to left.



Working with Populations

Lesson 1-4

DATE _____

TIME _____

Use the information in the table to solve the problems.



Populations of Cities		
City	2000 Census	2010 Census
New York City	8,008,278	8,175,133
Los Angeles	3,694,820	3,857,799
Houston	1,953,631	2,160,821
Philadelphia	1,517,550	1,547,607
San Diego	1,223,400	1,338,348
Boston	589,141	617,594
Milwaukee	596,974	594,833
Albuquerque	448,607	545,852
St. Paul	287,151	285,068
Norman	95,694	110,925

Source: U.S. Census

- Name two cities that have a 2010 population in the hundred-thousands.

- Name two cities that have a 2010 population in the millions.

- Boston's population in 2010 was 617,594. What is the value of the digit . . .
1? _____ 7? _____ 6? _____
- Philadelphia's population in 2010 was 1,547,607. What is the value of the digit . . .
4? _____ 1? _____ 5? _____
- Round the 2010 population of Houston to the nearest million. _____
- Did Boston's population increase or decrease from 2000 to 2010? _____
- Record the population for Norman in 2000 and 2010. Use $<$, $>$, or $=$ to compare.

- Which cities had populations that decreased from 2000 to 2010?

1 Subtract mentally.

a. $15 - 7 =$ _____

b. $150 - 70 =$ _____

c. $13 - 8 =$ _____

d. $130 - 80 =$ _____

e. $18 - 9 =$ _____

f. $180 - 90 =$ _____

3 Write $>$, $<$, or $=$ to make these number sentences true.

a. $952 - 52$ _____ $850 + 50$

b. 3 thousand _____ 3,001

c. 2,100 _____ $2,000 - 100$

d. 9 [10,000s] _____ 90,000



2 What is the largest number you can make with the digits 3, 0, 3, 8, and 0? Fill in the circle next to the best answer.

(A) 83,003

(B) 83,030

(C) 83,300

(D) 80,033



4 Cross out the 3 names that do not belong in the name-collection box. Label the box with the correct number.

25 - 13
20 - 7
6 * 2
4 * 3
40 - 23
7 * 3

5 Add.

a. $4,563 + 8,712 =$ _____

b. $3,656 + 7,997 =$ _____

6 Write 842,176 in words. Use a Place-Value Flip Book or chart to help you.



Estimating Sums and Differences

Lesson 1-5

DATE

TIME

SRB
82-89

Read the number stories. Choose an appropriate estimation strategy.

1 Workers in a toy factory make stuffed bears. The goal is to make at least 1,200 bears every 3 hours. In 1 hour they made 447 bears. In the next hour they made 453 bears. In the third hour they made 458 bears.

a. Did they meet the 3-hour goal? _____

b. How did you get your answer? _____

c. Why did you choose this estimation strategy? _____

2 Stella is saving up to buy a bicycle that costs \$250. She has saved \$96 so far. Her aunt gave her another \$48.

a. About how much more money does Stella need? About _____

b. How did you get your answer? _____

c. Why did you choose this estimation strategy? _____

1 Subtract mentally.

a. $15 - 8 =$ _____

b. $150 - 80 =$ _____

c. $13 - 7 =$ _____

d. $130 - 70 =$ _____

e. $14 - 6 =$ _____

f. $140 - 60 =$ _____

2 Use a Place-Value Flip Book or chart. In the number 742,318, the 2 stands for 2,000.

a. The 1 stands for _____.

b. The 8 stands for _____.

c. The 4 stands for _____.

d. The 3 stands for _____.

e. The 7 stands for _____.



3 Put these numbers in order from least to greatest.

32,000 3,200

23,000 2,300



4 a. Round 6,245 to the nearest . . .
thousand _____

ten _____

b. Round 591,340 to the nearest . . .
hundred-thousand _____

ten-thousand _____



5 **Writing/Reasoning** What steps do you follow when you round a number?



World's Tallest Buildings

Lesson 1-6

DATE

TIME

Math Message

SRB
82-84

- 1 Terrell is a competitive stair climber. He competes by climbing stairs as fast as he can. This year he wants to climb 400 stories. The Burj Khalifa in the United Arab Emirates is the world's tallest building with 163 stories. The Petronas Towers, the tallest building in Malaysia, has 88 stories. The Zifeng Tower in China has 89 stories. If Terrell climbs these three buildings, how many more stories will he need to climb to reach his goal of 400?

Estimate: _____ stories

Answer: _____ stories

Number model with answer: _____

Estimate and then solve.

- 2 Terrell climbed four buildings in the United States. In Chicago, he climbed the Willis Tower (108 stories) and the John Hancock Center (100 stories). In New York City, he climbed the Empire State Building (102 stories) and the Bank of America Tower (54 stories). How many stories did he climb in all?

Estimate: _____ stories

Answer: _____ stories

Number model with answer: _____

Does your answer make sense? _____ How do you know? _____

- 3 Terrell climbed four buildings for a total of 472 stories. He climbed the Burj Khalifa (163 stories), the Abraj Al Bait in Saudi Arabia (120 stories), the Taipei 101 in Taiwan (101 stories), and another tall building. How many stories tall is the last building he climbed?

Estimate: _____ stories

Answer: _____ stories

Number model with answer: _____

Does your answer make sense? _____ How do you know? _____

World's Tallest Buildings (continued)

Lesson 1-6

DATE

TIME

- 4 Two of China's tallest buildings are the Shanghai World Financial Center (101 stories) and the Zifeng Tower (89 stories). Two of the tallest buildings in the United States are the Willis Tower (108 stories) and the Trump Tower (98 stories). How many more stories do the two U.S. buildings have than the two buildings in China?

Estimate: _____ stories

Answer: _____ stories

Number model with answer: _____

Does your answer make sense? _____ How do you know?

Try This

- 5 The International Commerce Centre in Hong Kong has 118 stories. The Jin Mao Tower in Shanghai and Two International Finance Centre in Hong Kong have the same number of stories. If the 3 buildings together have 294 stories, how many stories do the Jin Mao Tower and Two International Finance Centre each have?

What is the unknown? _____

Estimate: _____ stories each

Answer: _____ stories each

Number model with answer: _____

Does your answer make sense? _____ How do you know?

1 Subtract mentally.

a. $11 - 2 =$ _____

b. $110 - 20 =$ _____

c. _____ $= 12 - 4$

d. $120 - 40 =$ _____

e. _____ $= 9 - 7$

f. $90 - 70 =$ _____

2 Which expanded form shows 3,458?
Fill in the circle next to ALL that apply.

a. $3 [1000s] + 4 [100s] + 5 [10s] + 8 [1s]$

b. $300 + 400 + 50 + 8$

c. $3,000 + 45 + 8$

d. $3,000 + 400 + 50 + 8$

SRB
80

3 Subtract. Show your work.

a.
$$\begin{array}{r} 664 \\ -392 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 424 \\ -296 \\ \hline \end{array}$$

SRB
94-101

4 Make an estimate. Write a number model to show your strategy.

a. $3,389 + 2,712$

b. $3,452 - 1,147$

SRB
82-89

5 Use a place-value tool. A number has . . .

6 in the hundreds place

2 in the tens place

8 in the hundred-thousands place

5 in the ones place

3 in the thousands place

4 in the ten-thousands place

Write the number.

_____ , _____

SRB
78-79

6 Write $>$, $<$, or $=$ to make each number sentence true.

a. 14 _____ 26

b. $3,003$ _____ $3,300$

c. $12 + 12$ _____ 24

d. $200 - 50$ _____ 100

e. $30 + 30$ _____ $50 + 10$

SRB
81