McGraw-Hill My Math

CCSS

# Reteach

## Teacher Edition

## Chapter 2


Mc Graw Hill

Grade 4

Name _____ Date _____

# Lesson 1 Reteach

## *Addition Properties and Subtraction Rules*

We use addition properties and subtraction rules to add and subtract. These properties and rules help us add numbers mentally. There are three main properties of addition and two subtraction rules to keep in mind as you add and subtract.

### Addition Properties

| **Commutative Property** | **Associative Property** | **Identity Property** |
|---|---|---|
| The order in which numbers are added does not change the sum. | The way in which numbers are grouped when added does not change the sum. | The sum of any number and 0 is the number. |
| **Example**<br>$3 + 1 = 4$<br>$1 + 3 = 4$ | **Example**<br>$(6 + \mathbf{5}) + 2 \quad 6 + (\mathbf{5} + 2)$<br>$11 \quad + 2 \quad 6 + \quad 7$<br>$13 \qquad 13$ | **Example**<br>$9 + 0 = 9$<br>$0 + 9 = 9$ |

### Subtraction Rules

| | |
|---|---|
| When you subtract 0 from any number, the result is the number.<br>**Examples**<br>$7 - 0 = 7 \qquad 5 - 0 = 5$ | When you subtract any number from itself, the result is 0.<br>**Examples**<br>$8 - 8 = 0 \qquad 4 - 4 = 0$ |

**Algebra Find each unknown. Identify the property or rule used.**

1. $5 + (3 + 4) = (3 + 4) + \boxed{5}$ **Associative**
2. $\boxed{7} + 0 = 7$ **Identity**
3. $6 - \boxed{6} = 0$ **subtraction**
4. $2 - \boxed{0} = 2$ **subtraction**
5. $(3 + 2) + 5 = 3 + (2 + \boxed{5})$ **Associative**

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# Lesson 2 Reteach

*Addition and Subtraction Patterns*

**You can use a number grid to find patterns in numbers.**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

As you look across a row from left to right, the numbers increase by 1. The pattern is + 1. So, the number in the ones place increases by 1 each time. As you look across a row from right to left, the numbers decrease by 1 each time. The pattern is – 1.

As you look at a column from top to bottom, the numbers increase by 10. The pattern is + 10. So, the number in the tens place increases by 1 each time. As you look at a column from bottom to top, the numbers decrease by 10 each time. The pattern is – 10.

You can find the same kind of number patterns in greater numbers.

If the pattern is + 100, the digit in the hundreds place increases by 1 each time. If the pattern is – 10,000, the digit in the ten thousands place decreases by 1 each time.

**Write each number.**

**1.** 10 less than 11,275

| ten thousands | thousands | hundreds | tens | ones |
|---|---|---|---|---|
| 1 | 1, | 2 | 7 | 5 |
| 1 | 1, | 2 | 6 | 5 |

**2.** 100 more than 5,456

| thousands | hundreds | tens | ones |
|---|---|---|---|
| 5, | 4 | 5 | 6 |
| 5, | 5 | 5 | 6 |

**3.** 1,000 more than 809

| thousands | hundreds | tens | ones |
|---|---|---|---|
| , | 8 | 0 | 9 |
| 1, | 8 | 0 | 9 |

**4.** 10,000 less than 91,342

| ten thousands | thousands | hundreds | tens | ones |
|---|---|---|---|---|
| 9 | 1, | 3 | 4 | 2 |
| 8 | 1, | 3 | 4 | 2 |

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# Lesson 3 Reteach

*Add and Subtract Mentally*

**Mental addition is easier if you make one of the addends a ten or a hundred.**

You can use this method to find 239 + 18 mentally.

239 — 239 is close to 240. Add 1 to 239. → 240

+18 — Since 1 was added to 239, take 1 away from 18. → + 17

257

} Now you have two numbers that are easy to add.

**Making a ten or hundred can also help you subtract mentally.**

497 — 497 is close to 500. Add 3 to 497. → 500

– 250 — Subtract 3 from 250. → 247

} Now you can subtract easily.

**Make a ten or hundred to mentally add.**

**1.** 73 + 18 = 71 + 20 = 91

**2.** 615 + 29 = 614 + 30 = 644

**3.** 202 + 46 = 200 + 48 = 248

**4.** 396 + 75 = 400 + 71 = 471

**Use mental math to subtract.**

**5.** 653 – 29

Make a ten. 29 + 1 = 30

653 – 30 = 623

623 – 1 = 622

653 – 29 = 622

**6.** 2,198 – 700

Make a hundred. 2,198 + 2 = 2,200

2,200 – 700 = 1,500

1,500 – 2 = 1,498

2,198 – 700 = 1,498

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# Lesson 4 Reteach

## *Estimate Sums and Differences*

When the word "about" is used in a problem, you should find an estimate. An estimate is an answer close to the exact answer. When estimating, you can round to the nearest ten, hundred, thousand, or ten thousand.

Estimate: 1,262 + 639.

Round to the nearest hundreds place. Then add.

1,262 + 639

↓ ↓

1,300 + 600 = 1,900

So, 1,262 + 639 is about 1,900.

Estimate: 798 − 246.

Round to the nearest tens place. Then subtract.

798 − 246

↓ ↓

800 − 250 = 550

So, 798 − 246 is about 550.

**Estimate. Round to the indicated place value.**

**1.** 5,277 + 5,439; ten 10,720

**2.** 3,857 − 1,899; hundred 2,000

**3.** 1,295 − 735; hundred 600

**4.** 2,689 − 1,640; ten 1,050

**5.** 25,633 + 33,821; thousand 60,000

**6.** 12,574 + 9,888; hundred 22,500

**7.** 15,529 − 13,178; thousand 3,000

**8.** 71,827 + 20,431; thousand 92,000

**9.** 32,441 + 16,532; thousand 49,000

**10.** 61,348 + 31,498; ten thousand 90,000

**11.** 48,188 − 15,644; ten thousand 30,000

**12.** 32,661 − 21,822; ten thousand 10,000

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# Lesson 5 Reteach

## *Add Whole Numbers*

The traditional method of adding whole numbers is from right to left. Did you know whole numbers can also be added from left to right?

Adding from left to right is a good method to try when adding in your head.

| Find 358 + 968. | 358<br>+ 968 |
|---|---|
| **Step 1:** Add the hundreds.<br><br>300<br>+ 900<br>1,200 | **Step 2:** Add the tens.<br><br>50<br>+ 60<br>110 |
| **Step 3:** Add the ones.<br><br>8<br>+ 8<br>16 | **Step 4:** Add the answers.<br><br>1,200<br>110<br>+ 16<br>1,326 |

**Find each sum. Check your work by estimating.**

**1.** 574 + 361 = **935**

**2.** 1,361 + 627 = **1,988**

**3.** 3,254 + 4,563 = **7,817**

**4.** 4,477 + 3,534 = **8,011**

**5.** 2,225 + 3,384 = **5,609**

**6.** 5,821 + 7,338 = **13,159**

**7.** 610,328 + 12,492 = **622,820**

**8.** 36,578 + 1,679 = **38,257**

**9.** 288,634 + 23,766 = **312,400**

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# Lesson 6 Reteach

## *Subtract Whole Numbers*

Subtraction of whole numbers is similar to addition of whole numbers in that you may need to regroup.

| | |
|---|---|
| Find 481 − 292. | 481<br>− 292 |
| **Step 1:** Rewrite the problem. | 4 hundreds 8 tens 1 one<br>− 2 hundreds 9 tens 2 ones |
| **Step 2:** Regroup 1 of the hundreds into an equivalent 10 tens. | 3 hundreds 18 tens 1 one<br>− 2 hundreds 9 tens 2 ones |
| **Step 3:** Regroup 1 of the tens into an equivalent 10 ones. | 3 hundreds 17 tens 11 ones<br>− 2 hundreds 9 tens 2 ones |
| **Step 4:** Subtract.<br><br>481 − 292 = 189 | 3 hundreds 17 tens 11 ones<br>− 2 hundreds 9 tens 2 ones<br>1 hundred 8 tens 9 ones |

**Subtract. Use addition or estimation to check.**

**1.** 6,561 − 272 = **6,289**

**2.** 3,811 − 428 = **3,383**

**3.** 7,785 − 1,494 = **6,291**

**4.** 1,261 − 633 = **628**

**5.** 2,536 − 844 = **1,692**

**6.** 8,831 − 566 = **8,265**

**7.** 15,619 − 12,828 = **2,791**

**8.** 91,160 − 58,535 = **32,625**

**9.** 112,914 − 100,265 = **12,649**

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# Lesson 7 Reteach

## *Subtract Across Zeros*

Subtraction with digits that are zeros has the same steps as subtraction with digits that are not zeros.

| | |
|---|---|
| Find 300 − 157. | 300<br>− 157 |
| **Step 1:** Regroup the hundreds by converting 1 hundred into 10 tens. | 2 10<br>~~3~~ ~~0~~ 0<br>− 1 5 7 |
| **Step 2:** Regroup the tens by converting 1 ten into 10 ones. | 9<br>2 ~~10~~ 10<br>~~3~~ ~~0~~ ~~0~~<br>− 1 5 7 |
| **Step 3:** Subtract. | 9<br>2 ~~10~~ 10<br>~~3~~ ~~0~~ ~~0~~<br>− 1 5 7<br>1 4 3 |

**Subtract. Use addition to check.**

**1.** 400 − 158 = **242**

**2.** 3,900 − 1,853 = **2,047**

**3.** 50,000 − 12,642 = **37,358**

**4.** $800 − $267 = **$533**

**5.** 6,000 − 4,322 = **1,678**

**6.** 70,000 − 48,551 = **21,449**

**7.** 600 − 319 = **281**

**8.** 9,000 − 6,866 = **2,134**

**9.** 130,000 − 89,628 = **40,372**

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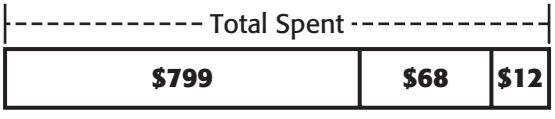
# Lesson 8 Reteach

## *Problem Solving: Draw a Diagram*

Alexander pays $799 for his laptop computer. He also buys a case for $68 and a mouse for $12. How much did Alexander spend in all?

| | |
|---|---|
| **Step 1**<br>Understand | Read the problem. Identify the important information.<br>What facts do you know?<br>**bought a laptop for $799, a case for $68 and a mouse for $12**<br>What do you need to find?<br>**how much Alexander spent in all** |
| **Step 2**<br>Plan | Make a plan for solving the problem.<br>Solve by making a diagram.<br>Follow your plan. Solve the problem. |
| **Step 3**<br>Solve |  <br>To find the total spent, add.<br>$799 + $68 + $21 = **$879**.<br>So, Alexander spent **$879** altogether. |
| **Step 4**<br>Check | Look back to see if your answer makes sense.<br>Estimate $800 + $70 + $10 = $880<br>Compare to the estimate. Was the estimate reasonable? |

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# Lesson 8 Reteach

*Problem Solving (continued)*

**Solve each problem by drawing a diagram.**

**1.** There are 12,465 fans attending the local football game this week. Last week, 16,038 fans attended the game. How many more fans attended the game last week than this week?

**See students' diagram; 3,573 fans**

**2.** Betty's Bakery sells 2,012 muffins each week. They also sell 5,025 cookies and 416 cakes each week. How many total items does the bakery sell each week?

**See students' diagram; 7,453 items**

**3.** Mr. Mason paid $18,099 for his car. Mr. Grayden paid $21,500 for his car. How much more did Mr. Grayden pay for his car than Mr. Mason?

**See students' diagram; $3,401**

**4.** Landon scored 47,526 points on his video game. Evan scored 27,065 more points than Landon. How many points did Evan score?

**See students' diagram; 74,591 points**

**5.** Mackenzie lives 2,258 miles from the ocean. If her family drives back and forth to the ocean on their vacation, how many total miles will they drive?

**See students' diagram; 4,516 miles**

**6.** Riley ran 1,025 meters at the track meet. Elizabeth ran 1,280 meters. How many more meters did Elizabeth run than Riley?

**See students' diagram; 255 meters**

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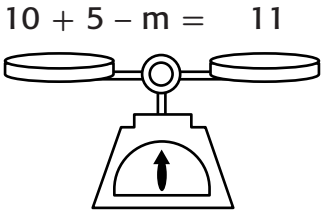
# Lesson 9 Reteach

## *Solve Multi-Step Word Problems*

A sentence that contains an equals sign is called an **equation**. Both sides of the equals sign are equal, or balanced.

Use a **variable** (a symbol, usually a letter) to represent the unknown amount.

**Jake has 10 marbles. Brady has 5 marbles. They gave a few marbles to Nathan. They have 11 marbles now. How many marbles did they give to Nathan?**




Write the equation: 10 + 5 – m = 11 marbles

What number makes both sides of the equals sign equal?

10 + 5 – **4** = 11 marbles

So, they gave Nathan 4 marbles.

**Write an equation to solve. Use a variable for the unknown.**

1. Zoe's bowling team has 16 girls and 7 boys. One of the girls quit the team. How many players do they have now?

   **16 + 7 – 1 = p; 22 players**

2. Madelyn and her mother baked 48 cookies. She took 24 cookies to school and her brother ate some too. They now have 18 cookies. How many cookies did Madelyn's brother eat?

   **48 – 24 – c = 18; 6 cookies**

3. Caden painted 12 paintings for the school art show. He sold 6 paintings the first day. He painted 4 more to show the second day. He sold 8 paintings the last day. How many paintings did Caden not sell?

   **12 – 6 + 4 – 8 = p; 2 paintings**

4. Hannah's choir group is selling coupon books for charity. Hannah sold 23 books and her friend Meghan sold 31. They have 6 books left to sell. How many total books did the two girls have to sell?

   **23 + 31 + 6 = b; 60 books**