

## Grade 3 Math

### Day 41: 3NBT.2 (addition)

**Standard:** Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

**Objective:** I can add within 1,000 using various strategies.

**Instructional learning video to support the objective:**

[https://learnzillion.com/lesson\\_plans/8182-solve-addition-problems-with-numbers-up-to-1-000-regrouping/lesson](https://learnzillion.com/lesson_plans/8182-solve-addition-problems-with-numbers-up-to-1-000-regrouping/lesson)

1. **Practice Worksheet:** EnVisions Reteach 8-8, Practice & Reteach 9-2
2. **Problem of the Day (POD)**

Suppose a bus travels 276 miles on Monday and 248 miles on Tuesday. How many miles does the bus travel? *Solve this problem any way you choose.*

3. **\*NEW!! Fun Online Practice:** Go on ST Math 30 minutes a day (access through Clever)
4. **Fluency Practice:** See the **NEW** Multiplication Fluency Folder for instructional videos and fun games to play!  
<https://resources.finalsite.net/images/v1588007094/brockton/t9xc918juhe4i9kga8tg/MultiplicationFluencyGr3-5.pdf>

**Digital Games to play to support addition:**

<https://www.turtlediary.com/common-core/CCSS.Math.Content.3.NBT.A.2/games.html>

<https://mrnussbaum.com/math/regrouping>

**Additional Online Resources:**

- Imagine Learning (via Clever)

## Review What You Know

### Vocabulary

Choose the best term from the box.  
Write it on the blank.

1. Compatible numbers  
are easy to add or subtract mentally.
2. According to the Associative Property of Addition, the grouping of addends can be changed, and the sum will remain the same.
3. Addition and subtraction are inverse operations.

- Commutative Property of Addition
- Associative Property of Addition
- compatible numbers
- inverse operations

### Rounding

Round each number to the nearest ten.

4. 57 60                      5. 241 240                      6. 495 500

Round each number to the nearest hundred.

7. 732 700                      8. 81 100                      9. 553 600

### Estimating Sums

Use compatible numbers to estimate each sum. Sample estimates given.

10.  $27 + 12$  40                      11.  $133 + 102$  230  
12.  $504 + 345$  850                      13.  $52 + 870$  925  
14.  $293 + 278$  600                      15.  $119 + 426$  550

### Estimating Differences

16. Tony and Kim play a video game. Tony scores 512 points. Kim scores 768 points. About how many more points does Kim score than Tony? Which estimation method did you use?

Sample answer: About 250 points; I used compatible numbers:  
 $750 - 500 = 250$ .

17. Which number sentence shows the most reasonable estimate for  $467 - 231$ ?

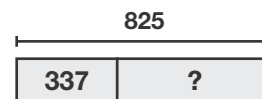
- ☐ Ⓐ  $425 - 250 = 175$                       ☐ Ⓒ  $400 - 300 = 100$   
☐ Ⓑ  $500 - 200 = 300$                       ☒ Ⓓ  $470 - 230 = 240$

**Vocabulary**

1. You can use a bar diagram to represent **addition** and **subtraction**.

Complete the addition equation for the bar diagram.

\_\_\_\_\_ + ? = \_\_\_\_\_



Complete the subtraction equation for the bar diagram.

\_\_\_\_\_ - ? = \_\_\_\_\_

2. Operations that undo each other are **inverse operations**. Addition and subtraction are inverse operations.

If you subtract  $68 - 15 = 53$ , you can add  $53 + 15$  to check your work.

68	53
- 15	+ 15
53	<input type="text"/>

Complete the addition to check.

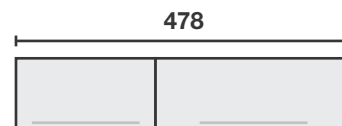
3. You can check a subtraction problem by using addition. Subtract. Then complete the addition to check.

379	<input type="text"/>
- 108	+ 108
<input type="text"/>	<input type="text"/>

4. You can check an addition problem by using subtraction. Add first. Then complete the subtraction to check.

533	<input type="text"/>
+ 324	- 324
<input type="text"/>	<input type="text"/>

5. Complete the bar diagram and solve.  
Alisha reads a book that has 478 pages. She has read 199 pages. How many more pages does she need to read to finish the book? \_\_\_\_\_

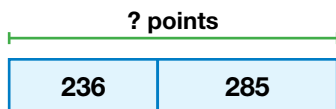

**On the Back!**

6. Find  $289 - 164$ . Show how you checked your answer. If your answer is incorrect, correct it.

# ☆ Guided Practice ☆

## Do You Understand?

1. Sue scored 236 points during the first half of her basketball season. She scored 285 points during the second half. How many points did she score during the entire season?



2. **MP.1 Make Sense and Persevere** In Exercise 1, how can you tell if your answer is reasonable?

## Do You Know How?

In **3–6**, estimate by rounding to the nearest ten. Then find each sum. You may use place-value blocks or drawings to help.

3. 
$$\begin{array}{r} 126 \\ + 171 \\ \hline 2\ \square\ \square \end{array}$$

4. 
$$\begin{array}{r} \square\ \square\ \square \\ 538 \\ + 429 \\ \hline \square\ \square\ 7 \end{array}$$

5. 
$$\begin{array}{r} \square\ \square\ \square \\ 415 \\ + 168 \\ \hline \square\ 8\ \square \end{array}$$

6. 
$$\begin{array}{r} \square\ \square\ \square \\ 391 \\ + 609 \\ \hline \square\ \square\ \square\ 0 \end{array}$$

# ☆ Independent Practice ☆

**Leveled Practice** In **7–18**, estimate by rounding to the nearest ten. Then find each sum.

7. 
$$\begin{array}{r} 136 \\ + 252 \\ \hline 3\ \square\ \square \end{array}$$

8. 
$$\begin{array}{r} \square\ \square\ \square \\ 678 \\ + 129 \\ \hline \square\ \square\ 7 \end{array}$$

9. 
$$\begin{array}{r} \square\ \square\ \square \\ 564 \\ + 283 \\ \hline 8\ \square\ \square \end{array}$$

10. 
$$\begin{array}{r} \square\ \square\ \square \\ 118 \\ + 335 \\ \hline \square\ 5\ \square \end{array}$$

11. 
$$\begin{array}{r} 172 \\ + 534 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 324 \\ + 508 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 309 \\ + 287 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 465 \\ + 285 \\ \hline \end{array}$$

15.  $582 + 230$

16.  $207 + 238$

17.  $424 + 391$

18.  $678 + 143$

# Math Practices and Problem Solving

In 19 and 20, use the table at the right.

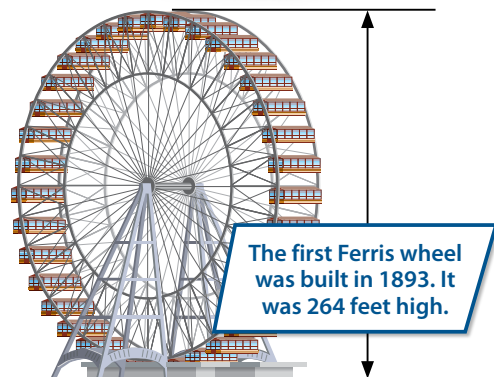
19. © **MP.4 Model with Math** How many soup can labels did Grades 1 and 2 collect? Estimate by rounding to the nearest hundred. Then solve. Write an equation that represents the problem.

20. © **MP.1 Make Sense and Persevere** Is your answer to Exercise 19 reasonable? Explain.

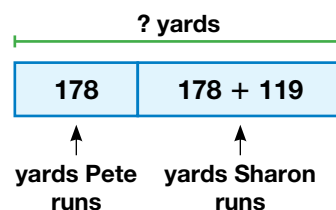
**DATA**

Soup Can Labels Collected	
Grades	Number
Grade 1	385
Grade 2	294
Grade 3	479
Grade 4	564

21. **Number Sense** The roller coaster Kingda Ka is 192 feet taller than the first Ferris wheel. Use the symbols  $<$  and  $>$  to compare the heights of the two rides in two different ways.



22. **Higher Order Thinking** Pete can run 178 yards in one minute. Sharon can run 119 more yards than Pete in one minute. How many yards can they both run in one minute?



## © Common Core Assessment

23. There were 126 tomato plants at the nursery. The owner planted 229 pepper plants. Complete the problem to find the total number of plants in the nursery. Show regrouping, if necessary.

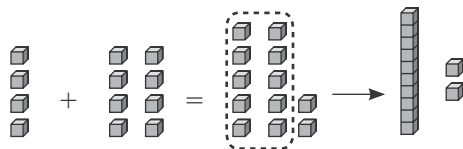
$$\begin{array}{r} \square \\ 126 \\ + 229 \\ \hline \square\square\square \end{array}$$

24. Josh was playing a board game. He scored 248 points in the first game and 273 points in the second game. Complete the problem to find the total number of points Josh scored. Show regrouping, if necessary.

$$\begin{array}{r} \square\square \\ 248 \\ + 273 \\ \hline \square\square\square \end{array}$$

**AZ Vocabulary**

1. When you **regroup**, you name a whole number in a different way.



4 ones + \_\_\_\_\_ ones = \_\_\_\_\_ ones

12 ones can be regrouped as \_\_\_\_\_ ten and \_\_\_\_\_ ones.

Find  $216 + 188$ .

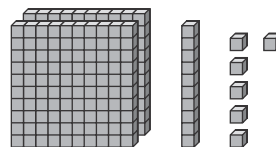
2. Add the ones.

6 ones + 8 ones = \_\_\_\_\_ ones

Regroup.

14 ones = \_\_\_\_\_ ten and \_\_\_\_\_ ones

$$\begin{array}{r} 21\overline{)6} \\ + 18\overline{)8} \\ \hline 4 \end{array}$$

**216****188**

3. Add the tens.

$$\begin{array}{r} \square \overline{)1} \\ 21\overline{)6} \\ + 18\overline{)8} \\ \hline \square 4 \end{array}$$

1 ten + 1 ten + 8 tens = \_\_\_\_\_ tens

Regroup.

10 tens = \_\_\_\_\_ hundred and \_\_\_\_\_ tens

4. Add the hundreds.

$$\begin{array}{r} \square \overline{)1} \\ 21\overline{)6} \\ + 18\overline{)8} \\ \hline \square 0 4 \end{array}$$

1 hundred + 2 hundreds + 1 hundred = \_\_\_\_\_ hundreds

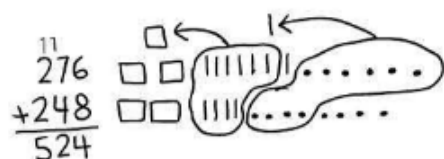
So,  $216 + 188 = \underline{\hspace{2cm}}$ .

**On the Back!**

5. Find  $362 + 475$  using place value. Add the ones, then tens, and hundreds. Regroup when needed.

## Analyze Student Work

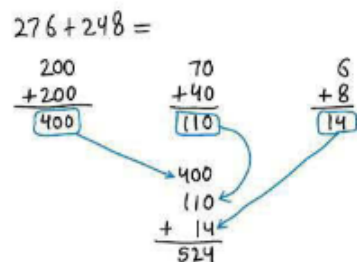
Kiko's Work



I drew the blocks I used next to the problem and showed how I would need to regroup the ones and tens. The bus travels 524 miles.

Kiko uses an algorithm with pictures of place-value blocks to solve the problem. Her work also models regrouping.

Michael's Work



The bus travels 524 miles.

Michael uses an expanded algorithm to solve the problem.



Name \_\_\_\_\_



## ☆ Guided Practice ☆

### Do You Understand?

1. Sue scored 236 points during the first half of her basketball season. She scored 285 points during the second half. How many points did she score during the entire season?



$$236 + 285 = 521 \text{ points}$$

2. **MP.1 Make Sense and Persevere** In Exercise 1, how can you tell if your answer is reasonable?

**Sample answer:** I can round 236 and 285 to 200 and 300.  $200 + 300 = 500$ , which is close to 521.

### Do You Know How?

In 3–6, estimate by rounding to the nearest ten. Then find each sum. You may use place-value blocks or drawings to help.

$$\begin{array}{r} 3. \quad 126 \\ + 171 \\ \hline 300; 297 \end{array}$$

$$\begin{array}{r} 4. \quad \boxed{1} \\ \quad 538 \\ + 429 \\ \hline 970; 967 \end{array}$$

$$\begin{array}{r} 5. \quad \boxed{1} \\ \quad 415 \\ + 168 \\ \hline 590; 583 \end{array}$$

$$\begin{array}{r} 6. \quad \boxed{1} \boxed{1} \\ \quad 391 \\ + 609 \\ \hline 1,000; 1,000 \end{array}$$

## ☆ Independent Practice ☆

**Leveled Practice** In 7–18, estimate by rounding to the nearest ten. Then find each sum.

$$\begin{array}{r} 7. \quad 136 \\ + 252 \\ \hline 390; 388 \end{array}$$

$$\begin{array}{r} 8. \quad \boxed{1} \boxed{1} \\ \quad 678 \\ + 129 \\ \hline 810; 807 \end{array}$$

$$\begin{array}{r} 9. \quad \boxed{1} \\ \quad 564 \\ + 283 \\ \hline 840; 847 \end{array}$$

$$\begin{array}{r} 10. \quad \boxed{1} \\ \quad 118 \\ + 335 \\ \hline 460; 453 \end{array}$$

$$\begin{array}{r} 11. \quad 172 \\ + 534 \\ \hline 700; 706 \end{array}$$

$$\begin{array}{r} 12. \quad 324 \\ + 508 \\ \hline 830; 832 \end{array}$$

$$\begin{array}{r} 13. \quad 309 \\ + 287 \\ \hline 600; 596 \end{array}$$

$$\begin{array}{r} 14. \quad 465 \\ + 285 \\ \hline 760; 750 \end{array}$$



$$15. \quad 582 + 230 \\ 810; 812$$

$$16. \quad 207 + 238 \\ 450; 445$$

$$17. \quad 424 + 391 \\ 810; 815$$

$$18. \quad 678 + 143 \\ 820; 821$$



# Math Practices and Problem Solving

In 19 and 20, use the table at the right.

19. **MP.4 Model with Math** How many soup can labels did Grades 1 and 2 collect? Estimate by rounding to the nearest hundred. Then solve. Write an equation that represents the problem.

**Estimate:**  $400 + 300 = 700$ ;  
 $385 + 294 = 679$ ; Grades 1 and 2 collected 679 labels.

20. **MP.1 Make Sense and Persevere** Is your answer to Exercise 19 reasonable? Explain.

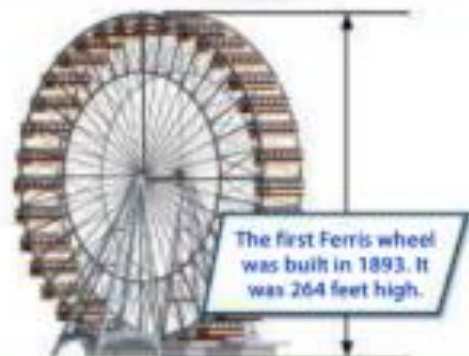
**Yes; 679 is close to my estimate of 700, so 679 is a reasonable answer.**

**DATA**

Grades	Number
Grade 1	385
Grade 2	294
Grade 3	479
Grade 4	564

21. **Number Sense** The roller coaster Kingda Ka is 192 feet taller than the first Ferris wheel. Use the symbols  $<$  and  $>$  to compare the heights of the two rides in two different ways.

**264 feet  $<$  456 feet; 456 feet  $>$  264 feet**



22. **Higher Order Thinking** Pete can run 178 yards in one minute. Sharon can run 119 more yards than Pete in one minute. How many yards can they both run in one minute?

**178 + 119 = 297 yards; 178 + 297 = 475 yards**



## Common Core Assessment

23. There were 126 tomato plants at the nursery. The owner planted 229 pepper plants. Complete the problem to find the total number of plants in the nursery. Show regrouping, if necessary.

$$\begin{array}{r} 1 \\ 126 \\ + 229 \\ \hline 355 \end{array}$$

24. Josh was playing a board game. He scored 248 points in the first game and 273 points in the second game. Complete the problem to find the total number of points Josh scored. Show regrouping, if necessary.

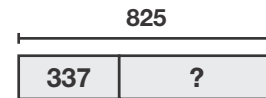
$$\begin{array}{r} 11 \\ 248 \\ + 273 \\ \hline 521 \end{array}$$

**AZ Vocabulary**

1. You can use a bar diagram to represent **addition** and **subtraction**.

Complete the addition equation for the bar diagram.

$$\underline{337} + ? = \underline{825}$$



Complete the subtraction equation for the bar diagram.

$$\underline{825} - ? = \underline{337}$$

2. Operations that undo each other are **inverse operations**. Addition and subtraction are inverse operations.

If you subtract  $68 - 15 = 53$ , you can add  $53 + 15$  to check your work.

$$\begin{array}{r} 68 \\ - 15 \\ \hline 53 \end{array} \quad \begin{array}{r} 53 \\ + 15 \\ \hline \boxed{68} \end{array}$$

Complete the addition to check.

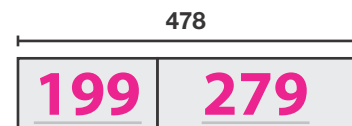
3. You can check a subtraction problem by using addition. Subtract. Then complete the addition to check.

$$\begin{array}{r} 379 \\ - 108 \\ \hline \boxed{271} \end{array} \quad \begin{array}{r} \boxed{271} \\ + 108 \\ \hline \boxed{379} \end{array}$$

4. You can check an addition problem by using subtraction. Add first. Then complete the subtraction to check.

$$\begin{array}{r} 533 \\ + 324 \\ \hline \boxed{857} \end{array} \quad \begin{array}{r} \boxed{857} \\ - 324 \\ \hline \boxed{533} \end{array}$$

5. Complete the bar diagram and solve.  
Alisha reads a book that has 478 pages. She has read 199 pages. How many more pages does she need to read to finish the book? 279 pages

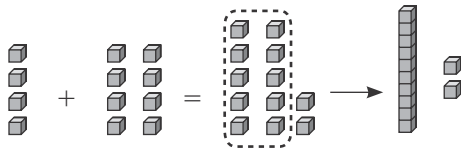


**On the Back! 125; Check students' work.**

6. Find  $289 - 164$ . Show how you checked your answer. If your answer is incorrect, correct it.

**AZ Vocabulary**

1. When you **regroup**, you name a whole number in a different way.



4 ones + **8** ones = **12** ones

12 ones can be regrouped as **1** ten and **2** ones.

Find  $216 + 188$ .

2. Add the ones.

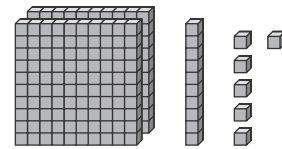
6 ones + 8 ones = **14** ones

Regroup.

14 ones = **1** ten and **4** ones

$$\begin{array}{r} 21\overline{)6} \\ + 18\overline{)8} \\ \hline 4 \end{array}$$

**216**



**188**



3. Add the tens.

$$\begin{array}{r} 1\overline{)21} \\ + 18\overline{)8} \\ \hline 04 \end{array}$$

1 ten + 1 ten + 8 tens = **10** tens

Regroup.

10 tens = **1** hundred and **0** tens

4. Add the hundreds.

$$\begin{array}{r} 1\overline{)21} \\ + 18\overline{)8} \\ \hline 404 \end{array}$$

1 hundred + 2 hundreds + 1 hundred = **4** hundreds

So,  $216 + 188 = \underline{\mathbf{404}}$ .

**On the Back!**

5. Find  $362 + 475$  using place value. Add the ones, then tens, and hundreds. Regroup when needed. **837; Check students' work.**