

## Grade 4 · Adding and Subtracting Multi-Digit Numbers · Worksheet Answer Key

Common Core 4.NBT.B.4 · mathovore.fr

Every solution below shows the regrouping column by column and ends with the final answer in bold. Compare your own work step by step, and use the addition check to find where a slip happened if your answer is different from the key.

### Grade 4Common Core: 4.NBT.B.4

### Problem 1: Add without regrouping

Add each place from the ones:  $4 + 3 = 7$  ones,  $1 + 7 = 8$  tens,  $2 + 5 = 7$  hundreds,  $3 + 4 = 7$  thousands.

$3,214 + 4,573 = 7,787$ . Answer: **7,787**

### Problem 2: Add with regrouping

Ones:  $8 + 7 = 15$ , write 5 and regroup 1 ten. Tens:  $6 + 5 + 1 = 12$ , write 2 and regroup 1 hundred. Hundreds:  $4 + 3 + 1 = 8$ . Thousands:  $2 + 1 = 3$ .

$$\begin{array}{r} \phantom{+} 2,468 \\ + 1,357 \\ \hline 3,825 \end{array}$$

Pink digits show the regrouped (carried) values.

**Answer: 3,825**

### Problem 3: Add with three regroupings

Ones:  $9 + 6 = 15$ , write 5, regroup 1. Tens:  $8 + 4 + 1 = 13$ , write 3, regroup 1. Hundreds:  $7 + 8 + 1 = 16$ , write 6, regroup 1. Thousands:  $5 + 2 + 1 = 8$ .

$$5,789 + 2,846 = 8,635.$$
 Answer: **8,635**

### Problem 4: Add five-digit numbers

Ones:  $2 + 9 = 11$ , write 1, regroup 1. Tens:  $8 + 5 + 1 = 14$ , write 4, regroup 1. Hundreds:  $4 + 7 + 1 = 12$ , write 2, regroup 1. Thousands:  $6 + 7 + 1 = 14$ , write 4, regroup 1. Ten thousands:  $3 + 2 + 1 = 6$ .

Answer: **64,241**

### Problem 5: Add six-digit numbers

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Ones:  $5 + 6 = 11$ , write 1. Tens:  $1 + 8 + 1 = 10$ , write 0. Hundreds:  $6 + 3 + 1 = 10$ , write 0. Thousands:  $8 + 9 + 1 = 18$ , write 8. Ten thousands:  $4 + 7 + 1 = 12$ , write 2. Hundred thousands:  $2 + 1 + 1 = 4$ .

Answer: **428,001**

### Problem 6: Subtract without regrouping

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Ones:  $6 - 4 = 2$ . Tens:  $9 - 2 = 7$ . Hundreds:  $8 - 5 = 3$ . Thousands:  $7 - 3 = 4$ .

Check:  $4,372 + 3,524 = 7,896$ . Answer: **4,372**

### Problem 7: Subtract with regrouping

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Ones: 1 is less than 9, so regroup 1 ten as 10 ones:  $11 - 9 = 2$ . Tens: 5 tens became 4 tens, and  $4 - 2 = 2$ . Hundreds: 4 is less than 7, so regroup 1 thousand as 10 hundreds:  $14 - 7 = 7$ . Thousands: 6 became 5, and  $5 - 2 = 3$ .

$$\begin{array}{r}
 \text{5} \quad \text{14} \quad \text{4} \quad \text{11} \\
 \text{6} \text{ , } \text{4} \text{ 5 } \text{1} \\
 - \quad \text{2} \text{ , } \text{7} \text{ 2 } \text{9} \\
 \hline
 \text{3} \text{ , } \text{7} \text{ 2 } \text{2}
 \end{array}$$

Orange digits show the numbers after regrouping.

Check:  $3,722 + 2,729 = 6,451$ . Answer: **3,722**

### Problem 8: Subtract with several regroupings

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Ones: 3 is less than 7, and the tens digit is 0. Regroup from the hundreds: 2 hundreds become 1 hundred and 10 tens, then 1 ten becomes 10 ones. Ones:  $13 - 7 = 6$ . Tens:  $9 - 6 = 3$ . Hundreds: 1 is less than 5, so regroup 1 thousand:  $11 - 5 = 6$ . Thousands:  $7 - 4 = 3$ .

$$\begin{array}{r}
 \phantom{0}7 \phantom{0}11 \phantom{0}9 \phantom{0}13 \\
 \phantom{0}8, \phantom{0}2 \phantom{0}0 \phantom{0}3 \\
 - \phantom{0}4, \phantom{0}5 \phantom{0}6 \phantom{0}7 \\
 \hline
 \phantom{0}3, \phantom{0}6 \phantom{0}3 \phantom{0}6
 \end{array}$$

Zeros in the tens place become 9 after regrouping.

Answer: **3,636**

### Problem 9: Subtract across zeros

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Regroup 1 thousand as 10 hundreds, 1 hundred as 10 tens, and 1 ten as 10 ones. The top number becomes 4 thousands, 9 hundreds, 9 tens, and 10 ones. Subtract:  $10 - 6 = 4$ ,  $9 - 7 = 2$ ,  $9 - 3 = 6$ ,  $4 - 2 = 2$ .

Check:  $2,624 + 2,376 = 5,000$ . Answer: **2,624**

### Problem 10: Subtract six-digit numbers

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Regroup across the zeros: the top number becomes 4 hundred thousands, 4 ten thousands, 9 thousands, 9 hundreds, 9 tens, and 10 ones. Ones:  $10 - 4 = 6$ . Tens:  $9 - 6 = 3$ . Hundreds:  $9 - 7 = 2$ . Thousands:  $9 - 8 = 1$ . Ten thousands:  $4 - 2 = 2$ . Hundred thousands:  $4 - 1 = 3$ .

Check:  $321,236 + 128,764 = 450,000$ . Answer: **321,236**

### Problem 11: Find the missing addend

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Subtract the known addend from the total:  $7,031 - 2,486 = 4,545$ .

Check:  $4,545 + 2,486 = 7,031$ . Answer: **4,545**

### Problem 12: Check by adding

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Check:  $5,643 + 3,457 = 9,100$ , which is not 9,000. So her answer is wrong.

Correct subtraction:  $9,000 - 3,457 = 5,543$ . Check:  $5,543 + 3,457 = 9,000$ . Answer: **No; the correct difference is 5,543**

### Problem 13: Find the mistake in addition

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Jamal never regrouped. In the ones,  $8 + 5 = 13$ , so he should write 3 and regroup 1 ten; he dropped the 1. The same happened in the tens ( $7 + 4 = 11$ ) and the hundreds ( $6 + 5 = 11$ ).

$$\begin{array}{r}
 \phantom{+} \overset{1}{4} \, \overset{1}{6} \, \overset{1}{7} \, 8 \\
 + 3 \, 5 \, 4 \, 5 \\
 \hline
 8 \, 2 \, 2 \, 3
 \end{array}$$

The pink digits are the regrouped values Jamal forgot.

Answer: **8,223**

#### Problem 14: Add three numbers

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First,  $12,408 + 3,596 = 16,004$ . Then  $16,004 + 25,731 = 41,735$ .

Answer: **41,735**

#### Problem 15: Compare sums and differences

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$6,308 + 2,795 = 9,103$  and  $10,000 - 891 = 9,109$ .

Since 9,103 is less than 9,109, the answer is  $<$ .

#### Problem 16: Little League tickets

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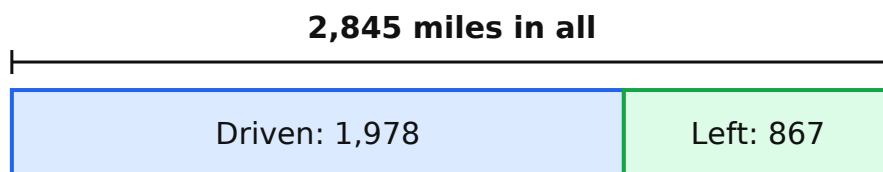
Add the parts:  $1,248 + 1,375 = 2,623$ .

Answer: **2,623 tickets**

#### Problem 17: Road trip miles left

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Subtract the part from the whole:  $2,845 - 1,978 = 867$ .



Check:  $1,978 + 867 = 2,845$ .

Answer: **867 miles**

#### Problem 18: Bake sale budget

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$\$12,475 - \$4,868 = \$7,607$ . Check:  $7,607 + 4,868 = 12,475$ .

Answer: **\$7,607**

### **Problem 19: Two towns**

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(a)  $48,305 - 36,478 = 11,827$ .

(b)  $48,305 + 36,478 = 84,783$ .

Answer: **(a) 11,827 people; (b) 84,783 people**

### **Problem 20: Farmers market apples**

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$2,364 + 1,897 = 4,261$ . Then  $4,261 + 3,058 = 7,319$ .

Answer: **7,319 pounds**

### **Problem 21: Stadium crowds**

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(a) Friday:  $52,000 - 38,645 = 13,355$ . Saturday:  $52,000 - 47,298 = 4,702$ .

(b)  $47,298 - 38,645 = 8,653$ .

Answer: **(a) 13,355 and 4,702 empty seats; (b) 8,653 more fans**

### **Problem 22: Library books**

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After Monday:  $15,200 - 3,486 = 11,714$ . After Tuesday:  $11,714 + 2,719 = 14,433$ .

Answer: **14,433 books**

### **Problem 23: Video views goal**

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Views so far:  $34,568 + 29,745 = 64,313$ . Views needed:  $100,000 - 64,313 = 35,687$ .

Check:  $35,687 + 64,313 = 100,000$ . Answer: **35,687 views**