Unit 2 · Multi-Digit Addition and Subtraction Cheat Sheet

Unit 2 focus: adding and subtracting with the standard algorithm

1 Big Idea

Line up digits by place value. Work from right to left and regroup when you need to.

2 Important Vocabulary

sum	The answer to an addition problem.	3,200 + 1,500 = 4,700
difference	The answer to a subtraction problem.	5,000 − 1,250 = 3,750
regroup	Trade 10 of one place for 1 of the next place, or 1 for 10.	13 ones = 1 ten and 3 ones
standard algorithm	The step-by-step written method for adding or subtracting by place value.	Line up the digits and start with the ones

3 How It Works

Add 4,768 + 2,595.

Example: Add each place, starting with the ones.
Ones: 8 + 5 = 13 write 3, regroup 1 ten
Tens: 6 + 9 + 1 = 16 write 6, regroup 1 hundred
Hundreds: 7 + 5 + 1 = 13 write 3, regroup 1 thousand
Thousands: 4 + 2 + 1 7

Answer: 7,363

4 Visual Model

Subtract across zeros: 5,000 − 2,768

Rename 5,000 as 4 thousands, 9 hundreds, 9 tens, 10 ones

4,9 9 10 − 2,7 6 8 = 2,232

Check: 2,232 + 2,768 = 5,000

5 ★ Remember This · Watch Out!

★ Remember this

- Regroup 10 ones as 1 ten, 10 tens as 1 hundred, and so on.
- Check subtraction with addition.

⚠ Watch out!

- **Do not subtract upside down:** in 52 − 38, regroup; do not do 8 − 2
- **Do not forget the regrouped digit:** add it to the next column

6 Try It!

1. 3,406 + 2,875 = ?
   Answer: 6,281
2. 7,000 − 3,416 = ?
   Answer: 3,584

Answers are printed upside down. Turn the page to check!

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More practice: estimating and solving word problems

1 Big Idea

Estimate first so you know about how big the answer should be. Then solve and compare.

2 Important Vocabulary

estimate	Find an answer that is close to the exact answer.	4,872 + 3,215 is about 8,000
reasonable	Close to what an estimate predicts.	8,087 is reasonable for 4,872 + 3,215
equation	A number sentence with an equals sign.	n + 250 = 900
unknown	A number you are trying to find, often shown by a letter.	In n + 250 = 900, n is the unknown

3 How It Works

A zoo had 4,872 visitors on Saturday and 3,215 on Sunday. How many in all?

Example: Estimate, then add.
Estimate: 5,000 + 3,000 = 8,000
Add: 4,872 + 3,215 = 8,087
Compare: 8,087 is close to 8,000

Answer: 8,087 visitors

4 Visual Model

In all, altogether, total → add

How many more, how many fewer, left → subtract

Use a letter for the unknown: 250 + n = 900

Two steps? Do one step at a time.

5 ★ Remember This · Watch Out!

★ Remember this

- Round each number to the same place to estimate.
- Label your answer with the unit.

⚠ Watch out!

- **Read the whole problem:** some problems need two steps
- **An estimate is not the exact answer:** use it to check, then compute

6 Try It!

1. Estimate 6,180 + 2,940 by rounding to the nearest thousand.
   Answer: 9,000
2. A store had 5,200 toys. It sold 1,350 and got 400 more. How many now?
   Answer: 4,250

Answers are printed upside down. Turn the page to check!