GRADE 3 MATHEMATICS | CHAPTER 1

FIVE-DAY CHAPTER | NUMBER SENSE AND OPERATIONS

Original student workbook. 100 independent practice questions, 20 spiral reviews, guided examples, advanced challenges and a chapter test.

Type answers in the PDF fields, save your completed file locally and print it. Use paper for drawings, detailed regrouping and long explanations.

Students may work beyond their grade level when ready, but this chapter is designed around Grade 3 number-sense prerequisites.

Student initials: _____

Date: _____

Day 1 | Place Value, Expanded Form and Comparing

DIRECT INSTRUCTION

A digit’s value depends on its place. In 4,372, the 4 means four thousands, 3 means three hundreds, 7 means seven tens and 2 means two ones.

Worked example: 5,206 = 5,000 + 200 + 6. There are 0 tens, so that place contributes zero.

Compare numbers starting with the greatest place. For 6,412 and 6,421, the thousands and hundreds match; compare the tens digits: 1 is less than 2, so 6,412 is smaller.

GUIDED EXAMPLES

01. Model 3,508 as 3 thousands, 5 hundreds, 0 tens and 8 ones.

02. Explain which is greater, 7,041 or 7,014, using the first differing digit.

Day 1 | Place Value, Expanded Form and Comparing | INDEPENDENT P

Solve each problem. Show calculations on paper if the field is too small.

01. Write 4,309 in expanded form.

02. Write 8,070 in expanded form.

03. Write 2,506 in expanded form.

04. Write the standard form: 6,000 + 400 + 50 + 2.

05. Write the standard form: 9,000 + 30 + 5.

06. Write the value of 7 in 7,216.

07. Write the value of 7 in 4,703.

08. Write the value of 7 in 2,870.

09. Write 5,018 in words.

10. Write four thousand, sixty-two in digits.

11. Compare 3,504 ___ 3,540.

12. Compare 8,299 ___ 8,302.

13. Compare 6,060 ___ 6,006.

Day 1 | Place Value, Expanded Form and Comparing | Independent

14. Order ascending: 4,109; 4,901; 4,190.

15. Order descending: 7,507; 7,570; 7,057.

16. What number is 100 more than 3,850?

17. What number is 10 less than 6,000?

18. Which digit is in the hundreds place in 8,264?

19. True or false: 9,009 has nine hundreds. Explain.

20. Explain why 5,042 is greater than 5,024.

SPIRAL REVIEW

21. Compute 38 + 47.

22. Compute 92 - 38.

23. What is 6 groups of 3?

24. Write an equation for 4 groups of 5.

ADVANCED CHALLENGE

Create two different 4-digit numbers using 0, 2, 5 and 8 exactly once each. Find the greatest and smallest and explain each decision.

Continued

Teacher check: Record independent answers, reasoning and any required reteaching. A quick check is not a claim of full annual grade mastery.

Day 2 | Rounding and Estimation

DIRECT INSTRUCTION

Rounding replaces a number with a nearby multiple of 10 or 100. Find the two nearest benchmark values and compare distances.

Worked example: 467 lies between 400 and 500. Because it is closer to 500, 467 rounds to 500 to the nearest hundred.

A nearest-ten estimate of 238 + 164 is 240 + 160 = 400. Exact calculation is 402, close to the estimate.

GUIDED EXAMPLES

01. Place 351 on a number line between 300 and 400. Explain why it rounds to 400 to the nearest hundred.

02. Round 687 to the nearest ten and explain the role of the ones digit.

Day 2 | Rounding and Estimation | INDEPENDENT PRACTICE

Solve each problem. Show calculations on paper if the field is too small.

01. Round 47 to the nearest ten.

02. Round 63 to the nearest ten.

03. Round 85 to the nearest ten.

04. Round 123 to the nearest ten.

05. Round 178 to the nearest ten.

06. Round 299 to the nearest ten.

07. Round 542 to the nearest hundred.

08. Round 649 to the nearest hundred.

09. Round 750 to the nearest hundred.

10. Round 1,249 to the nearest hundred.

11. Round 2,951 to the nearest hundred.

12. Round 3,499 to the nearest hundred.

13. Estimate 236 + 151 by rounding each to nearest hundred.

Day 2 | Rounding and Estimation | Independent

14. Estimate 462 + 325 by rounding each to nearest hundred.

15. Estimate 789 - 211 by rounding each to nearest hundred.

16. Round 78 to the nearest ten, then add 10.

17. Round 431 to the nearest hundred, then subtract 100.

18. True or false: 450 rounds to 400 to nearest hundred using the usual half-up rule.

19. Write a number between 620 and 629 that rounds to 620 to nearest ten.

20. Explain why a rounded answer is useful even if not exact.

SPIRAL REVIEW

21. Find the value of 6 in 6,508.

22. Compare 4,027 and 4,072.

23. Compute 7 - 4.

24. Compute 81 - 29.

ADVANCED CHALLENGE

Continued

A family estimates three grocery items costing $18.79, $22.10 and $9.95. Round to dollars, predict the total, then find the exact total. Discuss the difference.

Teacher check: Record independent answers, reasoning and any required reteaching. A quick check is not a claim of full annual grade mastery.

Day 3 | Addition with Regrouping and Reasonableness

DIRECT INSTRUCTION

Align ones below ones, tens below tens and hundreds below hundreds. Add starting at the ones place and regroup when a place totals 10 or more.

Worked example: 376 + 458. Ones: 6+8=14, write 4 and carry 1 ten. Tens: 7+5+1=13, write 3 and carry 1 hundred. Hundreds: 3+4+1=8. Result: 834.

Check: 376 is about 400 and 458 about 500, so 834 is reasonable near 900. Estimation does not replace exact calculation.

GUIDED EXAMPLES

01. Explain each regroup in 268 + 175.

02. Add 2,709 + 1,685 and check with a rough estimate.

Day 3 | Addition with Regrouping and Reasonableness | INDEPENDEN

Solve each problem. Show calculations on paper if the field is too small.

01. Add 248 + 376. _____

02. Add 569 + 184. _____

03. Add 387 + 256. _____

04. Add 709 + 195. _____

05. Add 465 + 328. _____

06. Add 278 + 649. _____

07. Add 923 + 187. _____

08. Add 507 + 298. _____

09. Add 1,248 + 2,367. _____

10. Add 3,605 + 1,486. _____

11. Add 2,709 + 1,685. _____

12. Add 4,078 + 2,947. _____

13. Add 1,999 + 2,001. _____

Day 3 | Addition with Regrouping and Reasonableness | Independen

14. Add 6,085 + 1,725.

15. Add 2,468 + 3,579.

16. Estimate 487 + 396 to nearest hundred, then compute exact.

17. Estimate 750 + 169 to nearest hundred, then compute exact.

18. A library owned 386 books and received 248 more. How many now?

19. A team counted 1,475 visitors on one day and 1,628 on another. Total?

20. Explain whether 786 + 328 = 1,014 is reasonable and correct it if needed.

SPIRAL REVIEW

21. Round 682 to nearest ten.

22. Value of 4 in 3,412?

23. Find 9 - 3.

24. Compute 63 - 25.

ADVANCED CHALLENGE

Continued

Write a three-number addition problem whose exact answer is 2,000, using different positive three-digit numbers. Show a check.

Teacher check: Record independent answers, reasoning and any required reteaching. A quick check is not a claim of full annual grade mastery.

Day 4 | Subtraction with Regrouping

DIRECT INSTRUCTION

A subtraction can be solved by regrouping place values. If there are not enough ones, trade one ten for ten ones; across zeros, continue trading from a higher place.

Worked example: 604 - 278. Trade 1 hundred for 10 tens, then 1 ten for 10 ones. Ones: 14 - 8 = 6. Tens: 9 - 7 = 2. Hundreds: 5 - 2 = 3. Result 326.

Check the answer by addition: 326 + 278 = 604. An inverse operation catches many errors.

GUIDED EXAMPLES

01. Subtract 703 - 286 using place-value trades. Write one trade at a time.

02. Subtract 1,002 - 478, then verify with addition.

Day 4 | Subtraction with Regrouping | INDEPENDENT PRACTICE

Solve each problem. Show calculations on paper if the field is too small.

01. Subtract 705 - 268.

02. Subtract 903 - 475.

03. Subtract 604 - 278.

04. Subtract 800 - 357.

05. Subtract 1,002 - 478.

06. Subtract 1,305 - 687.

07. Subtract 2,000 - 955.

08. Subtract 5,010 - 2,786.

09. Subtract 7,002 - 3,468.

10. Subtract 4,500 - 1,875.

11. Subtract 3,601 - 1,938.

12. Subtract 6,020 - 2,751.

13. Subtract 8,004 - 5,678.

Day 4 | Subtraction with Regrouping | Independent

14. Subtract 1,000 - 499.

15. Subtract 9,100 - 4,762.

16. Check 907 - 358 by adding your difference to 358.

17. Estimate 742 - 286 to nearest hundred then compute exact.

18. A library had 804 books; 287 were borrowed. How many remain?

19. There were 1,200 seats and 738 were occupied. How many empty?

20. Find and explain the error in the claim 500 - 236 = 364.

SPIRAL REVIEW

21. Compute 278 + 459.

22. Round 453 to nearest hundred.

23. Find 7 - 6.

24. Compare 6,409 and 6,490.

ADVANCED CHALLENGE

A customer has $1,000 to spend. Three items cost $245, $318 and $127. Find the amount left, showing both addition and subtraction checks.

Continued

Teacher check: Record independent answers, reasoning and any required reteaching. A quick check is not a claim of full annual grade mastery.

Day 5 | Mixed Practice, Word Problems and Chapter Test

DIRECT INSTRUCTION

Read a problem once for the story and again for quantities, units and what is asked. Decide whether to add, subtract, multiply or divide; more than one step may be necessary.

Worked example: There are 4 trays holding 6 cups each. If 7 cups are used, the remainder is (4 - 6) - 7 = 17 cups.

Show each step and label units. If a number is implausible, revisit the operation and question.

GUIDED EXAMPLES

01. A box has 8 packages of 5 pencils. Twelve are given away. Find how many remain and explain both operations.

02. A school receives 365 books in September and 278 in October, then lends 195. How many remain? Explain.

Day 5 | Mixed Practice, Word Problems and Chapter Test | INDEPEN

Solve each problem. Show calculations on paper if the field is too small.

01. Write 6,502 in expanded form.

02. Compare 4,760 ___ 4,706.

03. Round 687 to the nearest ten.

04. Round 1,349 to the nearest hundred.

05. Compute 478 + 365.

06. Compute 2,684 + 1,379.

07. Compute 904 - 578.

08. Compute 2,010 - 986.

09. Compute 7 - 8.

10. Compute 48 - 6.

11. A teacher buys 5 packs of 9 stickers. How many stickers?

12. A class has 32 students in 4 equal groups. How many per group?

Day 5 | Mixed Practice, Word Problems and Chapter Test | Indepen

13. The team counts 248 visitors Monday and 376 Tuesday. Total?

14. A tank holds 900 liters and 465 are used. How many liters remain?

15. A farmer packs 6 baskets with 7 apples each. Then 8 apples are sold. How many remain?

16. Five groups of six books are placed on a shelf, then twelve more books arrive. Total?

17. A club has $800. It spends $275 and then $168. How much remains?

18. A bus has 48 seats. 19 seats are empty. How many are occupied?

19. Explain which is greater: 3,509 or 3,590.

20. Write an estimate and show why 702 - 295 is near 400.

SPIRAL REVIEW

21. What is the value of the 8 in 8,046?

22. Compute 36 + 58.

23. Compute 60 - 27.

Day 5 | Mixed Practice, Word Problems and Chapter Test | Review

24. Complete 4, 8, 12, __, __.

ADVANCED CHALLENGE

Design a two-step problem using a purchase and change from $100. Give realistic prices, solve it, and explain the estimate.

Teacher check: Record independent answers, reasoning and any required reteaching. A quick check is not a claim of full annual grade mastery.

Day 5 contains an independent chapter test. Check all 20 questions before opening the separate parent guide. Suggested instructional review: 17 to 20 correct with sound strategies suggests readiness to extend; 13 to 16 suggests targeted reteaching; fewer than 13 suggests more direct instruction and a new assessment. These are local instructional targets, not externally validated cut scores.

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