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| **Grade 4 Module 1: Place Value, Rounding, and Algorithms for Addition and Subtraction**  |
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**Grade 4 Module 1**

**Lesson 1**

Fluency Practice (13 minutes)

⬛ Sprint: Multiply and Divide by 10 4.2A, 4.4B (10 minutes)

⬛ Place Value 4.2B, 4.2C (3 minutes)

**Sprint: Multiply and Divide by 10 (10 minutes)**

Materials: (S) Multiply and Divide by 10 Sprint

Note: Reviewing this fluency activity acclimates students to the

Sprint routine, a vital component of the fluency program.

**Place Value (3 minutes)**

Materials: (S) Personal white board, unlabeled thousands

place value chart (Template)

Note: Reviewing and practicing place value skills in isolation

prepares students for success in multiplying different place

value units during the lesson.

T: (Project place value chart to the thousands.) Show 4

ones as place value disks. Write the number below it.

S: (Draw 4 ones disks and write 4 below it.)

T: Show 4 tens disks, and write the number below it.

S: (Draw 4 tens disks and write 4 at the bottom of the tens column.)

T: Say the number in unit form.

S: 4 tens 4 ones.



T: Say the number in standard form.

S: 44.

Continue for the following possible sequence: 2 tens 3 ones, 2 hundreds 3 ones, 2 thousands 3 hundreds,

2 thousands 3 tens, and 2 thousands 3 hundreds 5 tens and 4 ones.

**Lesson 2**

Fluency Practice (12 minutes)

⬛ Skip-Counting 3.4E (4 minutes)

⬛ Place Value 4.2B, 4.2C (4 minutes)

⬛ Multiply by 10 4.2A, 4.4B (4 minutes)

**Skip-Counting (4 minutes)**

Note: Practicing skip-counting on the number line builds a foundation for accessing higher-order concepts throughout the year.

Direct students to count by threes forward and backward to 36, focusing on the crossing-ten transitions.

Example: (3, 6, 9, 12, 9, 12, 9, 12, 15, 18, 21, 18, 21, 24, 27, 30, 27, 30, 33, 30, 33, 30, 33, 36...). The purpose of focusing on crossing the ten transitions is to help students make the connection that, for example, when adding 3 to 9, 9 + l is 10, and then 2 more is 12.

There is a similar purpose in counting down by threes; 12 − 2 is 10, and subtracting 1 more is 9. This work builds on the fluency work of previous grade levels. Students should understand that when crossing the ten, they are regrouping.

Direct students to count by fours forward and backward to 48, focusing on the crossing-ten transitions.

**Place Value (4 minutes)**

Materials: (S) Personal white board, unlabeled thousands place value chart (Lesson 1 Template)

Note: Reviewing and practicing place value skills in isolation prepares students for success in multiplying

different place value units during the lesson.

T: (Project the place value chart to the thousands place.) Show 5 tens as place value disks, and write

the number below it.

S: (Draw 5 tens. Write 5 below the tens column and 0 below the ones column.)

T: (Draw to correct student misunderstanding.) Say the number in unit form.

S: 5 tens.

T: Say the number in standard form.

S: 50.

Continue for the following possible sequence: 3 tens 2 ones, 4 hundreds 3 ones, 1 thousand 2 hundreds,

4 thousands 2 tens, and 4 thousands 2 hundreds 3 tens 5 ones.

**Multiply by 10 (4 minutes)**

Materials: (S) Personal white board

Note: This fluency activity reviews concepts learned in Lesson 1.

T: (Project 10 ones X 10 = 1 .) Fill in the blank.

S: (Write 10 ones X 10 = 1 hundred.)

T: Say the multiplication sentence in standard form.

S: 10 X 10 = 100.

Repeat for the following possible sequence: 10 X = 2 hundreds; 10 × = 3 hundreds;

10 X = 7 hundreds; 10 × 1 hundred = 1 ; 10 × = 2 thousands;

10 X = 8 thousands; 10 × 10 thousands = .

**Lesson 3**

Fluency Practice (15 minutes)

⬛ Sprint: Multiply by 3 3.4E (10 minutes)

⬛ Place Value and Value 4.2B, 4.2C (3 minutes)

⬛ Base Ten Units 4.2A, 4.4B (2 minutes)

**Sprint: Multiply by 3 (10 minutes)**

Materials: (S) Multiply by 3 Sprint

**Place Value and Value (3 minutes)**

Materials: (T) Unlabeled billions place value chart (Template)

Note: Reviewing and practicing place value skills in isolation prepares students for success in multiplying

different place value units during the lesson.

T: (Project the number 1,468,357 on a place value chart. Underline the 5.) Say the digit.

S: 5.

T: Say the place value of the 5.

S: Tens.

T: Say the value of 5 tens.

S: 50.

Repeat the process, underlining 8, 4, 1, and 6.

**Base Ten Units (2 minutes)**

Note: This fluency activity bolsters students’ place value proficiency while reviewing multiplication concepts

learned in Lessons 1 and 2.

T: (Project 2 tens = .) Say the number in standard form.

S: 2 tens = 20.

Repeat for the following possible sequence: 3 tens, 9 tens, 10 tens, 11 tens, 12 tens, 19 tens, 20 tens, 30

tens, 40 tens, 80 tens, 84 tens, and 65 tens.

**Lesson 4**

Fluency Practice (13 minutes)

⬛ Skip-Counting 3.4E, 3.4K, 3.5D (3 minutes)

⬛ Place Value 4.2B (2 minutes)

⬛ Numbers Expressed in Different Base Units 4.2A (8 minutes)

**Skip-Counting (3 minutes)**

Note: Practicing skip-counting on the number line builds a foundation for accessing higher-order concepts throughout the year.

Direct students to skip-count by fours forward and backward to 48 focusing on transitions crossing the ten.

**Place Value (2 minutes)**

Materials: (S) Personal white board, unlabeled billions place value chart (Lesson 3 Template)

Note: Reviewing and practicing place value skills in isolation

prepares students for success in writing multi-digit numbers in

expanded notation.

T: Show 5 hundred thousands as place value disks, and

write the number below it on the place value chart

S: (Draw 5 hundred thousands disks and write 500,000

below the chart.)

T: Say the number in unit form.

S: 5 hundred thousands.

T: Say it in standard form.

S: 500,000.

Continue for the following possible sequence: 5 hundred thousands 3 ten thousands,

5 hundred thousands 3 hundreds, 5 ten thousands 3 hundreds, 1 million 3 hundreds 5 tens,

and 4 hundred millions 2 ten thousands 5 tens 3 ones, 2 billions 4 ten millions 6 hundred thousands.

**Numbers Expressed in Different Base Units (8 minutes)**

Materials: (S) Personal white board

Note: This fluency activity prepares students for success in writing multi-digit numbers in expanded notation.

**Base Hundred Units**

T: (Project 3 hundreds = .) Say the number in standard form.

S: 300.

Continue with a suggested sequence of 9 hundreds, 10 hundreds, 19 hundreds, 21 hundreds, 33 hundreds, 30 hundreds, 100 hundreds, 200 hundreds, 500 hundreds, 530 hundreds, 537 hundreds, and 864 hundreds.

**Base Thousand Units**

T: (Project 5 thousands = .) Say the number in standard form.

S: 5,000.

Continue with a suggested sequence of 9 thousands, 10 thousands, 20 thousands, 100 thousands,

220 thousands, and 347 thousands.

**Base Ten Thousand Units**

T: (Project 7 ten thousands = .) Say the number in standard form.

S: 70,000.

Continue with a suggested sequence of 9 ten thousands, 10 ten thousands, 12 ten thousands,

19 ten thousands, 20 ten thousands, 30 ten thousands, 80 ten thousands, 81 ten thousands,

87 ten thousands, and 99 ten thousands.

**Base Hundred Thousand Units**

T: (Project 3 hundred thousands = .) Say the number in standard form.

S: 300,000.

Continue with a suggested sequence of 2 hundred thousands, 4 hundred thousands, 5 hundred thousands, 7 hundred thousands, 8 hundred thousands, and 10 hundred thousands.

**Lesson 5**

Fluency Practice (14 minutes)

⬛ Sprint: Multiply by 4 3.4E (10 minutes)

⬛ Unit Skip-Counting 4.2A, 4.4B (2 minutes)

⬛ Place Value 4.2B (2 minutes)

**Sprint: Multiply by 4 (10 minutes)**

Materials: (S) Multiply by 4 Sprint

Note: This fluency activity reviews a foundational Grade 3 standard that helps students learn standards

4.4C, 4.4D.

**Unit Skip-Counting (2 minutes)**

Note: This activity applies skip-counting fluency that was built during the first four lessons and applies to

concepts from the multiplying by ten lessons.

T: Count by twos to 20.

S: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20.

T: Now, count by 2 tens to 20 tens. Stop counting and raise your hand when you see me raise my

hand.

S: 2 tens, 4 tens, 6 tens.

T/S: (Raise hand.)

T: Say the number in standard form.

S: 60.

Continue, stopping students at 12 tens, 16 tens, and 20 tens.

Repeat the process. This time, count by threes to 30 and by 3 ten thousands to 30 ten thousands.

**Place Value (2 minutes)**

Note: Reviewing and practicing place value skills in isolation prepares students for success in comparing

numbers during the lesson.

T: (Write 3,487.) Say the number.

S: 3,487.

T: What digit is in the tens place?

S: 8.

T: (Underline 8.) What’s the value of the 8?

S: 80.

T: State the value of the 3.

S: 3,000.

T: 4?

S: 400.

Repeat for the following possible sequence: 59,607; 287,493; 742,952; 3,235,288; and 403,270,000.

**Lesson 6**

Fluency Practice (12 minutes)

⬛ Unit Skip-Counting 4.2A, 4.4B (3 minutes)

⬛ Rename the Units 4.2B (5 minutes)

⬛ Compare Numbers 4.2C (4 minutes)

**Unit Skip-Counting (3 minutes)**

Note: This activity applies skip-counting fluency to the

multiplying by ten lessons.

T: Count by threes to 30.

S: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30.

T: Now, count by 3 ten thousands to 30 ten thousands.

Stop counting and raise your hand when you see me

raise my hand.

S: 3 ten thousands, 6 ten thousands, 9 ten thousands.

T/S: (Raise hand.)

T: Say the number in standard form.

S: 90,000.

**Rename the Units (5 minutes)**

Note: This fluency activity applies students’ place value skills in a new context that helps them better access the lesson’s content.

Materials: (S) Personal white board

T: (Write 54,783.) Say the number.

S: 54,783.

T: How many thousands are in 54,783?

S: 54 thousands.

T: (Write 54,783 = thousands ones.) On your personal white board, fill in the equation.

S: (Write 54,783 = 54 thousands 783 ones.)

T: How many ten thousands are in 54,783?

S: 5 ten thousands.

T: (Write 54,783 = ten thousands hundreds ones.) On your board, fill in the equation.

S: (Write 54,783 = 5 ten thousands 47 hundreds 83 ones.)

Follow the same process and sequence for 234,673.

**Compare Numbers (4 minutes)**

Materials: (S) Personal white board

Note: This fluency activity reviews comparing number concepts learned in Lesson 5.

T: (Write 231,005 83,872.) On your personal white board, compare the numbers by writing the

greater than, less than, or equal to symbol.

S: (Write 231,005 > 83,872.)

Repeat using the following sequence: 6 thousands 4 hundreds 9 tens 5 ten thousands 4 hundreds 9

ones and 8 hundred thousands 7 thousands 8 hundreds 2 tens 807,820.

Continue, stopping students at 15 ten thousands, 21 ten thousands, and 30 ten thousands.

Repeat the process. This time, count by fours to 40 and by 4 hundred thousands to 40 hundred thousands.

**Lesson 7**

Fluency Practice (15 minutes)

⬛ Change Place Value 4.2A (5 minutes)

⬛ Number Patterns 4.2A (5 minutes)

⬛ Find the Midpoint 4.2D (5 minutes)

**Change Place Value (5 minutes)**

Materials: (S) Personal white board, unlabeled billions place value chart (Lesson 5 Template)

Note: This fluency activity reviews Lesson 6’s content.

T: (Project place value chart. Write 3 hundred thousands, 5 ten thousands, 2 thousands, 1 hundred,

5 tens, and 4 ones.) On your personal white board, draw place value disks, and write the numbers

beneath it.

S: (Draw disks and write 352,154.)

T: Show 100 more.

S: (Draw 1 more 100 disk, erase the number 1 in the hundreds place, and replace it with a 2 so that

their boards now read 352,254.)

Possible further sequence: 10,000 less; 100,000 more; 1 less; and 10 more.

Repeat with the following: 7,385; 297,084; and 306,032.

**Number Patterns (5 minutes)**

Materials: (S) Personal white board

Note: This activity synthesizes skip-counting fluency with Lesson 6’s content and applies it in a context that lays a foundation for rounding multi-digit numbers to the thousands place.

T: (Project 50,300; 60,300; 70,300; .) What is the place value of the digit that’s changing?

S: Ten thousand.

T: Count with me saying the value of the digit I’m pointing to. (Point at the ten thousand digit as

students count.)

S: 50,000; 60,000; 70,000.

T: On your personal board, write what number would come after 70,300.

S: (Write 80,300.)

Repeat for the following possible sequence, using place value disks if students are struggling:

92,010 82,010 72,010

135,004 136,004 137,004

832,743 832,643 832,543

271,543 281,543 291,543

**Find the Midpoint (5 minutes)**

Materials: (S) Personal white board

Note: Practicing this skill in isolation lays a foundation to conceptually understand

rounding on a vertical number line and reviews Grade 3 skills in anticipation of this

lesson.

Project a vertical number line with endpoints 10 and 20.



T: What’s halfway between 10 and 20?

S: 15.

T: (Write 15 halfway between 10 and 20. Draw a second

line with 1,000 and 2,000 as the endpoints.) How many

hundreds are in 1,000?

S: 10 hundreds.

T: (Below 1,000, write 10 hundreds.) How many hundreds are

in 2,000?

S: 20 hundreds.

T: (Write 20 hundreds below 2,000.) What’s halfway between

10 hundreds and 20 hundreds?

S: 15 hundreds.

T: (Write 1,500 halfway between 1,000 and 2,000. Below 1,500, write 15 hundreds.) On your personal

board, draw a vertical number line with two endpoints and a midpoint.

S: (Draw number line with two endpoints and a midpoint.)

T: Label 31,000 and 32,000 as endpoints.

S: (Label 31,000 and 32,000 as endpoints.)

T: How many hundreds are in 31,000?

S: 310 hundreds.

T: How many hundreds are in 32,000?

S: 320 hundreds.

T: Identify the midpoint.

S: (Write 31,500.)

Repeat the process and procedure to find the midpoint of 831,000 and 832,000; 63,000 and 64,000;

264,000 and 265,000; and 99,000 and 100,000.

**Lesson 8**

Fluency Practice (12 minutes)

⬛ Sprint: Find the Midpoint 4.2D (9 minutes)

⬛ Rename the Units 4.2B (3 minutes)

**Sprint: Find the Midpoint (9 minutes)**

Materials: (S) Find the Midpoint Sprint

Note: Practicing this skill in isolation lays a foundation to conceptually understand rounding on a vertical

number line.

**Rename the Units (3 minutes)**

Materials: (S) Personal white board

Note: This fluency activity applies students’ place value skills in a new context that helps them better access the lesson’s content.

T: (Write 357,468.) Say the number.

S: 357,468.

T: (Write 357,468 = thousands 468 ones.) On your

personal white boards, fill in the equation.

S: (Write 357,468 = 357 thousands 468 ones.)

Repeat process for 357,468 = ten thousands

7,468 ones; 357,468 = hundreds 6 tens 8 ones; and

357,468 = tens 8 ones.

**Lesson 9**

Fluency Practice (12 minutes)

⬛ Multiply by Ten 4.2A, 4.4B (5 minutes)

⬛ Round to Different Place Values 4.2D (7 minutes)

**Multiply by Ten (5 minutes)**

Materials: (S) Personal white board

Note: This fluency activity deepens the students’ foundation of multiplying by ten.

T: (Write 10 X 10 = .) Say the multiplication sentence.

S: 10 X 10 = 100.

T: (Write 10 X ten = 100.) On your personal white boards, fill in the blank.

S: (Write 10 X 1 ten = 100.)

T: (Write ten X ten = 100.) On your boards, fill in the blanks.

S: (Write 1 ten X 1 ten = 100.)

T: (Write ten X ten = hundred.) On your boards, fill in the blanks.

S: (Write 1 ten X 1 ten = 1 hundred.)

Repeat process for possible sequence: 1 ten X 20 = , 1 ten X 40 = hundreds, 1 ten X = 700, and

4 tens X 1 ten = hundreds.

Note: The use of the digit or a unit is intentional. It builds understanding of multiplying by different units

(6 ones times 1 ten equals 6 tens, so 6 tens times 1 ten equals 6 hundreds, not 6 tens).

**Round to Different Place Values (7 minutes)**

Materials: (S) Personal white board

Note: This fluency activity reviews Lesson 8’s objective and lays a foundation for today’s lesson.

T: (Write 63,941.) Say the number.

S: 63,941.

T: Round 63,941 to the nearest ten thousand. Between what 2 ten thousands is 63,941?

S: 6 ten thousands and 7 ten thousands.

T: On your boards, draw a vertical number line with 60,000 and 70,000 as endpoints.

S: (Draw a vertical number line with 60,000 and 70,000 as the endpoints.)

T: What’s halfway between 60,000 and 70,000?

S: 65,000.

T: Label 65,000 as the midpoint on your number line. Label 63,941 on your number line.

S: (Label 63,941 below 65,000 on their number lines.)

T: (Write 63,941 ≈ .) On your boards, fill in the blank, rounding 63,941 to the nearest ten thousand.

S: (Write 63,941 ≈ 60,000.)

Repeat process for 63,941 rounded to the nearest thousand; 47,261 rounded to the nearest ten thousand; 47,261 rounded to the nearest thousand; 618,409 rounded to the nearest hundred thousand; 618,409 rounded to the nearest ten thousand; and 618,904 rounded to the nearest thousand.

**Lesson 10**

Fluency Practice (12 minutes)

⬛ Sprint: Round to the Nearest 10,000 4.2D (9 minutes)

⬛ Multiply by 10 4.2A, 4.4B (3 minutes)

**Sprint: Round to the Nearest 10,000 (9 minutes)**

Materials: (S) Round to the nearest 10,000 Sprint

Note: This fluency activity reviews Lesson 9’s content and work toward automatizing rounding skills.

**Multiply by 10 (3 minutes)**

Materials: (S) Personal white board

Note: This fluency activity deepens student understanding of base ten units.

T: (Write 10 X 10 = .) Say the multiplication sentence.

S: 10 X 10 = 100.

T: (Write ten X 10 = 100.) On your personal white boards, fill in the blank.

S: (Write 1 ten X 10 = 100.)

T: (Write ten X ten = 100.) On your boards, fill in the blanks.

S: (Write 1 ten X 1 ten = 100.)

T: (Write ten X ten = hundred.) On your boards, fill in the blanks.

S: (Write 1 ten X 1 ten = 1 hundred.)

Repeat using the following sequence: 1 ten X 50 = , 1 ten X 80 = hundreds, 1 ten X = 600, and

3 tens X 1 ten = hundreds.

Note: Watch for students who say 3 tens × 1 ten is 3 tens rather than 3 hundreds.

**Lesson 11**

Fluency Practice (12 minutes)

⬛ Round to Different Place Values 4.2D (5 minutes)

⬛ Multiply by 10 4.2A, 4.4B (4 minutes)

⬛ Add Common Units 4.2D (3 minutes)

**Round to Different Place Values (5 minutes)**

Materials: (S) Personal white board

Note: This fluency activity reviews rounding skills that are building toward mastery.

T: (Write 3,941.) Say the number. We are going to round this number to the nearest thousand.

T: How many thousands are in 3,941?

S: 3 thousands.

T: (Label the lower endpoint of a vertical number line with 3,000.) And 1 more thousand is...?

S: 4 thousands.

T: (Mark the upper endpoint with 4,000.) Draw the same number line.

S: (Draw number line.)

T: What is halfway between 3,000 and 4,000?

S: 3,500.

T: Label 3,500 on your number line as I do the same.Now, label 3,941 on your number line.

S: (Label 3,500 and 3,941.)

T: Is 3,941 nearer to 3,000 or 4,000?

T: (Write 3,941 ≈ .) Write your answer on your personal white board.

S: (Write 3,941 ≈ 4,000.)

Repeat the process for 3,941 rounded to the nearest hundred; 74,621 rounded to the nearest ten thousand

and nearest thousand; and 681,904 rounded to the nearest hundred thousand, nearest ten thousand, and

nearest thousand.

**Multiply by 10 (4 minutes)**

Materials: (S) Personal white board

Note: This fluency activity deepens student understanding of base ten units.

T: (Write 10 X = 100.) Say the multiplication sentence.

S: 10 X 10 = 100.

T: (Write 10 X 1 ten = .) On your personal white boards, fill in the blank.

S: (Write 10 X 1 ten = 10 tens.)

T: (Write 10 tens = hundred.) On your personal white boards, fill in the blank.

T: (Write ten X ten = 1 hundred.) On your boards, fill in the blanks.

S: (Write 1 ten X 1 ten = 1 hundred.)

Repeat the process for the following possible sequence: 1 ten X 60 = , 1 ten X 30 = hundreds,

1 ten X = 900, and 7 tens X 1 ten = hundreds.

**Add Common Units (3 minutes)**

Materials: (S) Personal white board

Note: This mental math fluency activity prepares students for understanding the importance of the

algorithm.

T: (Project 303.) Say the number in unit form.

S: 3 hundreds 3 ones.

T: (Write 303 + 202 = .) Say the addition sentence, and answer in unit form.

S: 3 hundreds 3 ones + 2 hundreds 2 ones = 5 hundreds 5 ones.

T: Write the addition sentence on your personal white boards.

S: (Write 303 + 202 = 505.)

Repeat the process and sequence for 505 + 404; 5,005 + 5,004; 7,007 + 4,004; and 8,008 + 5,005.

**Lesson 12**

Fluency Practice (12 minutes)

⬛ Round to Different Place Values 4.2D (6 minutes)

⬛ Find the Sum 4.4A (6 minutes)

**Round to Different Place Values (6 minutes)**

Materials: (S) Personal white board

Note: This fluency activity reviews rounding skills that are building towards mastery.

T: (Project 726,354.) Say the number.

S: Seven hundred twenty-six thousand, three hundred fifty-four.

T: What digit is in the hundred thousands place?

S: 7.

T: What is the value of the digit 7?

S: 700,000.

T: On your personal white boards, round the number to the nearest hundred thousand.

S: (Write 726,354 ≈ 700,000.)

Repeat the process, rounding 726,354 to the nearest ten thousand, thousand, hundred, and ten. Follow the same process and sequence for 496,517.

**Find the Sum (6 minutes)**

Materials: (S) Personal white board

Note: This fluency activity prepares students for understanding

the importance of the algorithm.

T: (Write 417 + 232 = .) Solve by writing horizontally

or vertically.

S: (Write 417 + 232 = 649.)

Repeat the process and sequence for 7,073 + 2,312;

13,705 + 4,412; 3,949 + 451; 538 + 385 + 853; and

23,944 + 6,056 + 159,368.

**Lesson 13**

Fluency Practice (12 minutes)

⬛ Find the Sum 4.4A (6 minutes)

⬛ Subtract Common Units 4.2D (6 minutes)

**Find the Sum (6 minutes)**

Materials: (S) Personal white board

Note: This math fluency activity prepares students for understanding the importance of the addition

algorithm.

T: (Write 316 + 473 = \_\_\_\_.) Solve by writing an addition sentence horizontally or vertically.

S: (Write 316 + 473 = 789.)

Repeat the process and sequence for 6,065 + 3,731; 13,806 + 4,393; 5,928 + 124; and 629 + 296 + 962.

**Subtract Common Units (6 minutes)**

Materials: (S) Personal white board

Note: This mental math fluency activity prepares students for understanding the importance of the

subtraction algorithm.

T: (Project 707.) Say the number in unit form.

S: 7 hundreds 7 ones.

T: (Write 707 − 202 = \_\_\_\_.) Say the subtraction sentence and answer in unit form.

S: 7 hundreds 7 ones − 2 hundreds 2 ones = 5 hundreds 5 ones.

T: Write the subtraction sentence on your personal white boards.

S: (Write 707 − 202 = 505.)

Repeat the process and sequence for 909 − 404; 9,009 − 5,005; 11,011 − 4,004; and 13,013 − 8,008.

**Lesson 14**

Fluency Practice (10 minutes)

⬛ Base Ten Thousand Units 4.2B (2 minutes)

⬛ Find the Difference 4.4A (4 minutes)

⬛ Convert Units 4.8A, 4.8B (4 minutes)

**Base Ten Thousand Units (2 minutes)**

Materials: (S) Personal white board

Note: This fluency activity helps students work towards mastery of understanding base ten units.

T: (Project 8 ten thousands = \_\_\_\_\_.) Write the number in standard form.

S: 80,000.

Continue with the following possible sequence: 9 ten thousands, 10 ten thousands, 13 ten thousands,

19 ten thousands, 20 ten thousands, 30 ten thousands, 70 ten thousands, 71 ten thousands, 90 ten

thousands, and 100 ten thousands.

**Find the Difference (4 minutes)**

Materials: (S) Personal white board

Note: This math fluency activity prepares students for understanding the importance of the subtraction

algorithm.

T: (Write 735 − 203 = \_\_\_\_.) Write a subtraction sentence horizontally or vertically.

S: (Write 735 − 203 = 532.)

Repeat process and sequence for 7,045 − 4,003; 845 − 18; 5,725 − 915; and 34,736 − 2,806.

Convert Units (4 minutes)

Note: Reviewing the relationship between meters and centimeters learned in Grade 3 helps prepare students

to solve problems with metric measurement and to understand metric measurement’s relationship to place

value.

T: (Write 1 m = \_\_\_ cm.) How many centimeters are in a meter?

S: 1 m = 100 cm.

Repeat the process for 2 m, 3 m, 8 m, 8 m 50 cm, 7 m 50 cm, and 4 m 25 cm.

T: (Write 100 cm = \_\_\_ m.) Say the answer.

S: 100 cm = 1 m.

T: (Write l50 cm = \_\_\_ m \_\_\_ cm.) Say the answer.

S: 150 cm = 1 m 50 cm.

Repeat the process for 250 cm, 350 cm, 950 cm, and 725 cm.

**Lesson 15**

Fluency Practice (11 minutes)

⬛ Place Value 4.2B (3 minutes)

⬛ Find the Difference 4.4A (4 minutes)

⬛ Convert Units 4.8A, 4.8B (4 minutes)

**Place Value (3 minutes)**

Materials: (T) White board

Note: Practicing these skills in isolation helps lay a foundation for conceptually understanding this lesson’s

content.

T: (Write 4,598.) Say the number.

S: 4,598.

T: What digit is in the tens place?

S: 9.

T: (Underline 9.) What is the value of the 9?

S: 90.

T: State the value of the digit 4.

S: 4,000.

T: 5?

S: 500.

Repeat using the following possible sequence: 69,708; 398,504; and 853,967.

**Find the Difference (4 minutes)**

Materials: (S) Personal white board

Note: This math fluency activity prepares students for understanding the importance of the subtraction

algorithm.

T: (Write 846 − 304 = \_\_\_\_\_.) Write a subtraction sentence horizontally or vertically.

S: (Write 846 – 304 = 542.)

Repeat process and sequence for 8,056 − 5,004; 935 − 17; 4,625 − 815; and 45,836 − 2,906.

Convert Units (4 minutes)

Note: This material is a review of Grade 2 and Grade 3 and helps prepare students to solve problems with meters and centimeters in Grade 4, Module 2, Topic A.

Materials: (S) Personal white board

T: Count by 20 centimeters. When you get to 100 centimeters, say 1 meter. When you get to 200

centimeters, say 2 meters.

S: 20 cm, 40 cm, 60 cm, 80 cm, 1 m, 120 cm, 140 cm, 160 cm, 180 cm, 2 m.

Repeat process, this time pulling out the meter (e.g., 1 m 20 cm, 1 m 40 cm).

T: (Write 130 cm = \_\_\_ m \_\_\_ cm.) On your personal white boards, fill in the blanks.

S: (Write 130 cm = 1 m 30 cm.)

Repeat process for 103 cm, 175 cm, 345 cm, and 708 cm for composing to meters.

**Lesson 16**

Fluency Practice (12 minutes)

⬛ Sprint: Convert Meters and Centimeters to Centimeters 4.8A, 4.8B (8 minutes)

⬛ Compare Numbers 4.2B (4 minutes)

**Sprint: Convert Meters and Centimeters to Centimeters (8 minutes)**

Materials: (S) Convert Meters and Centimeters to Centimeters Sprint

Note: Reviewing unit conversions that were learned in Grade 3 helps to prepare students to solve problems with meters and centimeters in Module 2, Topic A.

**Compare Numbers (4 minutes)**

Materials: (S) Personal white board

Note: Reviewing this concept helps students work toward mastery of comparing numbers.

T: (Project 342,006 \_\_\_\_\_ 94,983.) On your personal white boards, compare the numbers by writing

the greater than, less than, or equal symbol.

S: (Write 342,006 > 94,893.)

Repeat with the following possible sequence: 7 thousands 5 hundreds 8 tens \_\_\_\_\_\_ 6 ten thousands 5

hundreds 8 ones, and 9 hundred thousands 8 thousands 9 hundreds 3 tens \_\_\_\_\_\_ 807,820.

**Lesson 17**

Fluency Practice (10 minutes)

⬛ Change Place Value 4.2B (5 minutes)

⬛ Convert Units 4.8A, 4.8B (5 minutes)

**Change Place Value (5 minutes)**

Materials: (S) Personal white board, labeled millions place value chart (Lesson 11 Template)

Note: This fluency activity helps students work toward mastery of using place value skills to add and subtract

different units.

T: (Project the place value chart to the millions place. Write 4 hundred thousands, 6 ten thousands,

3 thousands, 2 hundreds, 6 tens, 5 ones.) On your personal white board, write the number.

S: (Write 463,265.)

T: Show 100 more.

S: (Write 463,365.)

Possible further sequence: 10,000 less, 100,000 more, 1 less, and 10 more.

T: (Write 400 + 90 + 3 = .) On your place value chart, write the number.

Possible further sequence: 7,000 + 300 + 80 + 5; 20,000 + 700,000 + 5 + 80; 30,000 + 600,000 + 3 + 20.

Convert Units (5 minutes)

Note: This fluency activity strengthens understanding of the relationship between kilograms and grams

learned in Grade 3 and prepares students to use this relationship to solve problems in Module 2, Topic A. Use

a number bond to support understanding the relationship of grams and kilograms.

T: (Write 1 kg = g.) How many grams are in 1 kilogram?

S: 1 kg = 1,000 g.

Repeat the process for 2 kg, 3 kg, 8 kg, 8 kg 500 g, 7 kg 500 g, and 4 kg 250 g.



T: (Write 1,000 g = kg.) Say the answer.

S: 1,000 grams equals 1 kilogram.

T: (Write 1,500 g = kg g.) Say the answer.

S: 1,500 grams equals 1 kilogram 500 grams.

Repeat the process for 2,500 g, 3,500 g, 9,500 g, and 7,250 g.

**Lesson 18**

Fluency Practice (10 minutes)

⬛ Number Patterns 4.5B (5 minutes)

⬛ Convert Units 4.8A, 4.8B (5 minutes)

**Number Patterns (5 minutes)**

Materials: (S) Personal white board

Note: This fluency activity bolsters students’ place value understanding and helps them apply these skills to a variety of concepts.

T: (Project 40,100, 50,100, 60,100, .) What is the place value of the digit that’s changing?

S: Ten thousand.

T: Count with me saying the value of the digit I’m pointing to.

S: (Point at the ten thousand digit as students count.) 40,000, 50,000, 60,000.

T: On your personal white board, write what number would come after 60,100.

S: (Write 70,100.)

Repeat with the following possible sequence: 82,030, 72,030, 62,030, ; 215,003, 216,003, 217,003, ;

943,612, 943,512, 943,412, ; and 372,435, 382,435, 392,435, .

**Convert Units (5 minutes)**

Materials: (S) Personal white board

Note: This fluency activity strengthens understanding of the relationship between kilograms and grams

learned in Grade 3, preparing students to use this relationship to solve problems in Module 2, Topic A. Use a number bond to support understanding of the relationship between grams and kilograms.

T: Count by 200 grams starting at 0 grams and counting up to 2,000 grams. When you get to 1,000

grams, say “1 kilogram.” When you get to 2,000 grams, say “2 kilograms.”

S: 0 g, 200 g, 400 g, 600 g, 800 g, 1 kg, 1,200 g, 1,400 g, 1,600 g, 1,800 g, 2 kg.

Repeat the process, this time pulling out the kilogram (e.g., 1 kg 200 g, 1 kg 400 g).

T: (Write 1,300 g = kg g.) On your board, fill in the blanks to make a

true number sentence.

S: (Write 1,300 g = 1 kg 300 g.)



Repeat the process for 1,003 g, 1,750 g, 3,450 g, and 7,030 g.

**Lesson 19**

Fluency Practice (12 minutes)

⬛ Rename Units to Subtract 4.4A (5 minutes)

⬛ Add Up to the Next Unit 4.4A (3 minutes)

⬛ Convert Units 4.8A, 4.8B (4 minutes)

**Rename Units to Subtract (5 minutes)**

Note: This fluency activity supports further practice of decomposing a larger unit to make smaller units in order to subtract.

T: (Write 1 ten − 6 ones.) Am I ready to subtract?

S: No.

T: Rename 1 ten as 10 ones. Say the entire number sentence.

S: 10 ones minus 6 ones is 4 ones.

Repeat with 2 tens − 6 ones, 2 tens − 1 ten 6 ones, 1 hundred − 6 tens, 2 hundreds − 4 tens,

3 hundreds − 1 hundred 4 tens, 5 thousands − 3 hundreds, 5 thousands − 3 thousands 3 hundreds, 2 ten thousands − 3 hundreds.

**Add Up to the Next Unit (3 minutes)**

Note: This fluency activity strengthens students’ ability to make the next unit, a skill used when using the arrow way to add or subtract. This activity also anticipates students’ use of the arrow way to solve mixed measurement unit addition and subtraction in Module 2.

T: (Write 8.) How many more to make 10?

S: 2.

T: (Write 80.) How many more to make 100?

S: 20.

T: (Write 84.) How many more to make 100?

S: 16.

Repeat with the following numbers to make 1000: 200, 250, 450, 475, 600, 680, 700, 720, 800, 805, 855, and 945.

**Convert Units (4 minutes)**

Note: Reviewing unit conversions that were learned in Grade 3 helps prepare students to solve problems with centimeters and meters in Topic A of Module 2.

Materials: (S) Personal white board

T: (Write 1 m = cm.) How many centimeters are in a meter?

S: 1 m = 100 cm.

Repeat the process for 2 m, 3 m, 8 m, 8 m 50 cm, 7 m 50 cm, and 4 m 25 cm.

T: (Write 100 cm = m.) Say the answer.

S: 100 cm = 1 m.

T: (Write 150 cm = m cm.) Say the answer.

S: 150 cm = 1 m 50 cm. Repeat the process for 250 cm, 350 cm, 950 cm, and 725 cm.