Lesson 3-12 – Subtracting Decimals

Objectives:

- Students will divide positive integers from the multiplication table without remainders, as evidenced by them passing one-minute quizzes.
- Students will subtract multi-digit whole numbers, as evidenced by them completing a warm-up worksheet where they do so.
- Students will subtract decimals using base-10 blocks, as evidenced by them completing an in-class activity where they do so.
- Students will subtract decimals, as evidenced by them completing a homework assignment where they do so.

Student Materials on Desk Corner:

- Homework #3-11
- Homework Checker
- Warm-up & Notes Checker

Student Materials for Class:

- Homework Log
- Binder Paper
- Pencils

Teacher Materials:

- "Minute Quiz 3-12" for each student
- "Warm-up 3-12" for each student
- "Homework #3-12" handout for each student
- Poster paper and markers for student pairs
- Index cards with decimal subtraction problems
- Sample poster

Homework:

- Homework #3-12
- ALEKS

Time	Activity
10 min	**MINUTE QUIZ AND ATTENDANCE** **Minute Quiz and Warm-up** When the bell rings, quickly go around and put the **minute quiz** on each student's desk, face down. Then, start everyone on the quiz at the same time and give everyone one minute. While students are working on the quiz, pass out the **warm-ups** so that students can work on them once they're done with the minute quiz. After the minute is over, have a student collect the minute quizzes and give them to the teacher's aide (TA) to grade. **Attendance, Collect HW, and Warm-up Check** While students work on the warm-up, take **attendance** and have the TA collect **homework** & stamp homework checkers. At the end of the allotted time, go around and stamp the students' warm-up & notes **checkers**.
15 min	**MODELING THE ACTIVITY** Explain that today's lesson is on subtracting decimals, and we will investigate it using a group project with posters. Each group will get an index card with one of the following ten subtraction problems: 1.307 – 0.112, 1.570 – 0.234, 1.032 – 0.211, 1.73 – 0.511, 1.834 – 0.273 1.506 – 0.125, 1.580 – 0.457, 1.044 – 0.623, 1.55 – 0.215, 1.728 – 0.375 Students will model each number by drawing base-10 blocks. Use actual base-10 blocks to remind students what each means (big cube = 1, flat = 0.1, rod = 0.01, little cube = 0.001). Construct a sample poster as a class for the problem 1.305 – 0.123 so that students know what they must produce as a result of the activity.
15 min	**PAIR POSTER ACTIVITY** Let students know that they will only get one poster, so they must do them in pencil first, then later trace them with markers. Hand out the index cards and posters to the groups. At the end of the time, students must tape their posters to the board at the front of the room.

	When students finish, talk about the importance of subtracting place values together. Then, hand out the homework assignment.
35 min	**ALEKS** Groups of students should be sent to get laptops for **ALEKS**. Remind students that when returning the laptops, they must first get them checked by you or the TA. Use this student work time to **return graded homework**.
5 min	**CLEAN UP** Students check the laptops with the teacher or the TA before putting them away. Then, they pack up, sit in their seats, and wait to be dismissed.

Numeracy
Minute Quiz 3-12 A

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

21 ÷ 7	14 ÷ 7	48 ÷ 8
5 ÷ 1	12 ÷ 4	12 ÷ 4
45 ÷ 5	56 ÷ 8	6 ÷ 3
40 ÷ 5	36 ÷ 4	35 ÷ 7

Numeracy
Minute Quiz 3-12 A

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

21 ÷ 7	14 ÷ 7	48 ÷ 8
5 ÷ 1	12 ÷ 4	12 ÷ 4
45 ÷ 5	56 ÷ 8	6 ÷ 3
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Numeracy
Minute Quiz 3-12 A

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Date: Period:

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5 ÷ 1	12 ÷ 4	12 ÷ 4
45 ÷ 5	56 ÷ 8	6 ÷ 3
40 ÷ 5	36 ÷ 4	35 ÷ 7

Numeracy
Minute Quiz 3-12 B

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

54 ÷ 9	72 ÷ 8	108 ÷ 12
11 ÷ 1	56 ÷ 8	35 ÷ 5
20 ÷ 10	96 ÷ 8	2 ÷ 1
77 ÷ 7	99 ÷ 11	15 ÷ 3

Numeracy
Minute Quiz 3-12 B

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

54 ÷ 9	72 ÷ 8	108 ÷ 12
11 ÷ 1	56 ÷ 8	35 ÷ 5
20 ÷ 10	96 ÷ 8	2 ÷ 1
77 ÷ 7	99 ÷ 11	15 ÷ 3

Numeracy
Minute Quiz 3-12 B

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

54 ÷ 9	72 ÷ 8	108 ÷ 12
11 ÷ 1	56 ÷ 8	35 ÷ 5
20 ÷ 10	96 ÷ 8	2 ÷ 1
77 ÷ 7	99 ÷ 11	15 ÷ 3

Numeracy
Minute Quiz 3-12 C

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

32 ÷ 4	14 ÷ 7	66 ÷ 11
40 ÷ 8	4 ÷ 2	6 ÷ 1
70 ÷ 7	16 ÷ 2	40 ÷ 10
7 ÷ 1	80 ÷ 8	64 ÷ 8

Numeracy
Minute Quiz 3-12 C

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

32 ÷ 4	14 ÷ 7	66 ÷ 11
40 ÷ 8	4 ÷ 2	6 ÷ 1
70 ÷ 7	16 ÷ 2	40 ÷ 10
7 ÷ 1	80 ÷ 8	64 ÷ 8

Numeracy
Minute Quiz 3-12 C

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

32 ÷ 4	14 ÷ 7	66 ÷ 11
40 ÷ 8	4 ÷ 2	6 ÷ 1
70 ÷ 7	16 ÷ 2	40 ÷ 10
7 ÷ 1	80 ÷ 8	64 ÷ 8

Numeracy
Warm-up 3-12

Name:
Date: Period:

Evaluate each subtraction problem.

1) 456 – 123

2) 283 – 42

3) 973 – 243

4) 226 – 26

5) 368 – 219

6) 283 – 15

7) 523 – 256

8) 293 – 194

Numeracy
Warm-up 3-12

Name:
Date: Period:

Evaluate each subtraction problem.

1) 456 – 123

2) 283 – 42

3) 973 – 243

4) 226 – 26

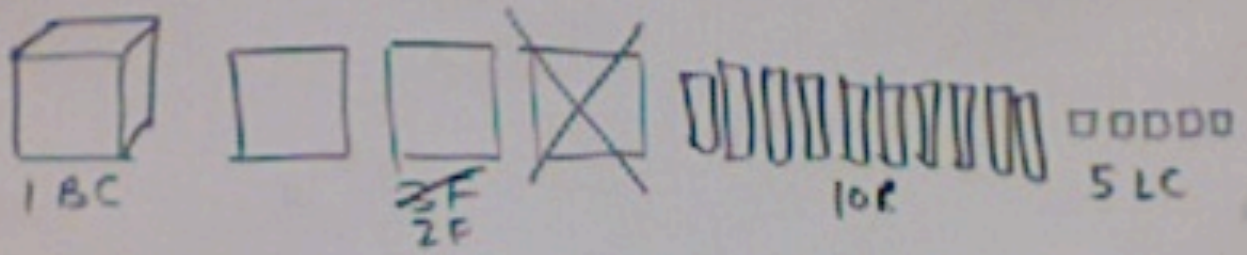
5) 368 – 219

6) 283 – 15

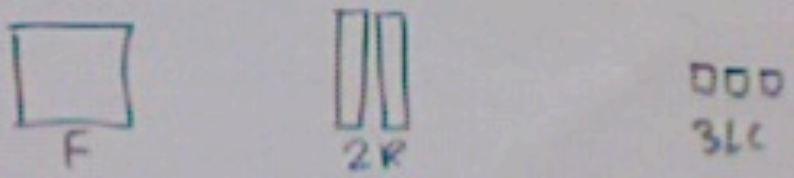
7) 523 – 256

8) 293 – 194

1.305



0.123



1.305 - 0.123

1.182

Numeracy Name:
Homework #3-12 – Subtracting Decimals Date: Period:

Evaluate the following subtraction problems using the tables provided for you.

Ex) 23.435 – 2.018

	Super Rod (SR)	Big Cube (BC)	Flat (F)	Rod (R)	Little Cube (LC)
	Tens 10's	Ones 1's	Tenths 1/10's	Hundredths 1/100's	Thousandths 1/1000's
23.435	2	3	4	$2\not{3}$	$15\not{5}$
2.018		2	0	1	8
23.435 – 2.018	2	1	4	1	7

So, 23.435 – 2.018 = 21.417

1) 5.678 – 1.23

	Super Rod (SR)	Big Cube (BC)	Flat (F)	Rod (R)	Little Cube (LC)
	Tens 10's	Ones 1's	Tenths 1/10's	Hundredths 1/100's	Thousandths 1/1000's
5.678					
1.23					
5.678 – 1.23					

So, 5.678 – 1.23 = _____

2) 2.435 – 1.017

	Super Rod (SR)	Big Cube (BC)	Flat (F)	Rod (R)	Little Cube (LC)
	Tens 10's	Ones 1's	Tenths 1/10's	Hundredths 1/100's	Thousandths 1/1000's
2.435					
1.017					
2.435 – 1.017					

So, 2.435 – 1.017 = _____

3) 15.425 – 4.283

	Super Rod (SR)	Big Cube (BC)	Flat (F)	Rod (R)	Little Cube (LC)
	Tens 10's	Ones 1's	Tenths 1/10's	Hundredths 1/100's	Thousandths 1/1000's
15.425					
4.283					
15.425 – 4.283					

So, 15.425 – 4.283 = _____

4) 2.345 – 0.546

	Super Rod (SR)	Big Cube (BC)	Flat (F)	Rod (R)	Little Cube (LC)
	Tens 10's	Ones 1's	Tenths 1/10's	Hundredths 1/100's	Thousandths 1/1000's
2.345					
0.546					
2.345 – 0.546					

So, 2.345 – 0.546 = _____

Now that you've subtracted decimals using tables, try subtracting without them! Evaluate the following subtraction problems. As always, show your work!

Ex) 23.435 – 2.018 = 21.417

$$\begin{array}{r} 23.435 \\ -\ \ 2.018 \\ \hline 21.417 \end{array}$$

5) 2.5 – 1.3

6) 1.234 – 0.12

7) 12.345 – 1.234

8) 4.283 – 1.015

9) 4 – 1.5