

Continuous Assessment in Fraction Subtraction: Student's response for LCM required

Fraction Addition
Subtraction

Subtraction

	Fraction-1		Fraction-2
Whole-1	2	Whole-2	4
8	-----	-	4
	3		5

Find the LCM of the denominators

LCM =

Write the fractions with the LCM as the common denominator, compare, and determine if Fraction-1 is larger than Fraction-2

?	?		?
Fraction-1	-----	-	Fraction-2
	<input type="text"/>		<input type="text"/>

Is Fraction-1 larger than or equal to Fraction-2?

Yes No

	Fraction-1		Fraction-2	
Whole-1	?	Whole-2	<input type="text"/>	
<input type="text"/>	-----	-	8	=
	<input type="text"/>		<input type="text"/>	?
	<input type="text"/>		<input type="text"/>	<input type="text"/>

Score

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Ames, Iowa, USA

41. Root	50
42. Units	51.0
43. Advanced Area	52. E
44. Volume	53. D
45. Geometry	46. Positive Negative Numbers
47. Order of Operations	48. Equations

Continuous Assessment in Fraction Subtraction: Incorrect Action and Feedback from Software

The screenshot shows a software interface for fraction subtraction. The main window is titled "Fraction Addition/Subtraction" and has a teal sidebar on the left with "Fraction Addition" and "Subtraction" options. The "Subtraction" section is active, displaying a problem: $\frac{2}{8} - \frac{4}{5}$. The user has entered "2" for Whole-1, "8" for the denominator of Fraction-1, "4" for Whole-2, and "5" for the denominator of Fraction-2. Below the problem, the user is asked to find the LCM of the denominators, with "LCM = ?" and a "Check" button. The user has entered "?". The software then asks the user to write the fractions with the LCM as the common denominator and determine if Fraction-1 is larger than Fraction-2. The user has entered "?" for both numerators and denominators. A dialog box titled "Answer" is open, showing a red "X" icon and the text "Try again", with an "OK" button. The background shows a grid of math topics like "41. Root", "42. Units", etc.

Fraction Addition
Subtraction

Subtraction

Fraction-1 Fraction-2

Whole-1 Whole-2

----- - -----

Find the LCM of the denominators

LCM =

Write the fractions with the LCM as the common denominator, compare, and determine if Fraction-1 is larger than Fraction-2

Fraction-1 Fraction-2 Is Fraction-1 larger than or equal to

 Yes No

----- -----

Fraction-1 Fraction-2

Whole-1 Whole-2

----- - ----- = -----

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41. Root 49. B
Word

42. Units 50. Tr

43. Advanced Area 51. Comp

44. Volume 52. Med
Electr

45. Geometry 53. Chem

46. Positive Negative
Numbers 54.

47. Order of Operations 55. S

48. Equations 56. S

Continuous Assessment in Fraction Subtraction: Correct Action and Feedback from Software

Fraction Addition/Subtraction

Fraction Addition
Subtraction

Subtraction

Fraction-1 Fraction-2

Whole-1 2 Whole-2 4

8 4

----- -----

3 5

Find the LCM of the denominators

LCM = 15

Write the fractions with the LCM as the common denominator,
compare, and determine if Fraction-1 is larger than Fraction-2

Is Fraction-1 larger than or equal to Fraction-2?

Yes No

Answer

Correct

Fraction-1 Fraction-2

Whole-1 ? Whole-2 ?

----- -----

8 = ?

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41. Root
42. Units
43. Advanced A
44. Volume
45. Geometry
46. Positive Nega
Numbers
47. Order of Oper
48. Equations

Continuous Assessment in Fraction Subtraction: Incorrect Action and Feedback from Software

Fraction Addition/Subtraction

**Fraction Addition
Subtraction**

Score

Close

Email Score

Print Score

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Subtraction

Fraction-1 Fraction-2

Whole-1 Whole-2

$\frac{\quad}{3}$ - $\frac{\quad}{5}$

Find the LCM of the denominators
LCM =

Write the fractions with the LCM as the common denominator,
compare, and determine if Fraction-1 is larger than Fraction-2

Fraction-1 $\frac{\text{Whole-1} \times \text{LCM} \div \text{Denominator-1}}{\text{LCM}}$ Fraction-2 $\frac{\text{Whole-2} \times \text{LCM} \div \text{Denominator-2}}{\text{LCM}}$

$\frac{\quad}{15}$ $\frac{\quad}{15}$ Is Fraction-1 larger than or equal to Fraction-2?

Yes No Check

Fraction-1 Fraction-2

Whole-1 Whole-2

$\frac{\quad}{8}$ - $\frac{\quad}{8}$ = $\frac{\quad}{8}$

Answer

Try again

OK

41. Root

42. Units

43. Advanced Area

44. Volume

45. Geometry

46. Positive Negative Numbers

47. Order of Operations

48. Equations

Continuous Assessment in Fraction Subtraction: Correct Action and Feedback from Software

**Fraction Addition
Subtraction**

Score

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Subtraction

Fraction-1

Whole-1

/

Fraction-2

Whole-2

/

----- - -----

Find the LCM of the denominators

LCM =

Write the fractions with the LCM as the common denominator, compare, and determine if Fraction-1 is larger than Fraction-2

Fraction-1

/

Fraction-2

/

Is Fraction-1 larger than or equal to Fraction-2?

Yes No

Fraction-1

Whole-1

/

Fraction-2

Whole-2

/

= /

Answer ✕

i

Correct

Percentage	41. Root
Page	42. Units
Word ns	43. Advanced Area
Compound t	44. Volume
Credit Card	45. Geometry
Budget	46. Positive Negative Numbers
Proportion	47. Order of Operations
Problems	48. Equations

Continuous Assessment in Fraction Subtraction: Student Allowed to Move Ahead *Only* after Correct Action

The screenshot shows a software interface for fraction subtraction. The main window is titled "Fraction Addition/Subtraction" and has a teal sidebar on the left with the text "Fraction Addition Subtraction". The main area is titled "Subtraction" and contains the following elements:

- Initial problem:
$$\text{Whole-1 } \frac{2}{8} - \text{Whole-2 } \frac{4}{5}$$
- Instruction: "Find the LCM of the denominators" with a text box containing "LCM = 15".
- Instruction: "Write the fractions with the LCM as the common denominator, compare, and determine if Fraction-1 is larger than Fraction-2".
- Intermediate step:
$$\text{Fraction-1 } \frac{10}{15} - \text{Fraction-2 } \frac{12}{15}$$
- Final step:
$$\text{Whole-1 } \frac{?}{?} - \text{Whole-2 } \frac{8}{8} = \frac{?}{?}$$

An "Instruction" pop-up window is overlaid on the interface, containing a warning icon and the text: "Fraction-1 is less than Fraction-2. Therefore, we need to borrow 1 from Whole-1 before subtraction". The pop-up has an "OK" button.

On the left sidebar, there is a "Score" field, a "Close" button, and "Email Score" and "Print Score" buttons. At the bottom left, it says "(c) Ambar K. Mitra Ames, Iowa, USA".

Continuous Assessment in Fraction Subtraction: Incorrect Action and Feedback from Software

**Fraction Addition
Subtraction**

Score

Close

Email Score

Print Score

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Subtraction

Fraction-1

Whole-1

-

Fraction-2

Whole-2

Find the LCM of the denominators

LCM =

Write the fractions with the LCM as the common denominator, compare, and determine if Fraction-1 is larger than Fraction-2

Fraction-1

-

Fraction-2

Is Fraction-1 larger than or equal to Fraction-2?

Yes No

Fraction-1 is smaller than Fraction-2.
Borrow 1 from Whole-1 and add it to Fraction-1.

Fraction-1

Whole-1

-

Fraction-2

Whole-2

=

Check

Answer

✖ Try again

OK

Continuous Assessment in Fraction Subtraction: Correct Action and Feedback from Software

**Fraction
Addition
Subtraction**

Score

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Subtraction

Fraction-1

Whole-1

Fraction-2

Whole-2

-

Find the LCM of the denominators

LCM =

Write the fractions with the LCM as the common denominator,
compare, and determine if Fraction-1 is larger than Fraction-2

Fraction-1

Fraction-2

Is Fraction-1 larger than or equal to Fraction-2?

Yes No

Fraction-1 is smaller than Fraction-2.
Borrow 1 from Whole-1 and add it to Fraction-1.

Fraction-1

Whole-1

Fraction-2

Whole-2

=

Answer

i

Correct

Summative Assessment: Making *email* Connection with Teacher

The screenshot shows a software interface titled 'Arithmetic Gateway'. The main window has a dark background with the word 'Arithmetic' in a large, white, serif font. Below it, there is a message: 'Setup email connection with your teacher. You need a gmail account for this connection. You need to do this only once'. A button labeled 'Email Setup' is visible. An 'Email Setup' dialog box is open in the foreground, containing four input fields and two buttons.

Arithmetic Gateway

Arithmetic

Setup email connection with your teacher. You need a gmail account for this connection. You need to do this only once

Email Setup

Email Setup

Enter your gmail Username as myusername@gmail.com

Enter your gmail Password

Enter your teacher's email address

Enter your name

Accept Close

Summative Assessment: Software Keeps Student's Score and Sends Score to Teacher by *email*

Fraction Addition/Subtraction

Fraction Addition Subtraction

Subtraction

Next

Fraction-1 Fraction-2

Whole-1 1 Whole-2 5

3 2

5 9

Find the LCM of the denominators

LCM = 45

Write the fractions with the LCM as the common denominator, compare, and determine if Fraction-1 is larger than Fraction-2

Score 3

Close

Email Score

Print Score

Is Fraction-1 larger than or equal to Fraction-2?

Yes No

Fraction-1 is smaller than Fraction-2.
Borrow 1 from Whole-1 and add it to Fraction-1.

Fraction-1 Fraction-2

Whole-1 54 Whole-2 25

2 2

45 45

0 29

45 45

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41. Root

42. Units

43. Advanced Area

44. Volume

45. Geometry

46. Positive Negative Numbers

47. Order of Operations

48. Equations

49. Equa Word Pro

50. Trigon

51. Computer

52. Mecha Electrical

53. Chemical

54. Roc

55. Statis

56. Statis