**Learning objective**

The intent of the remedial is to provide extra help to students struggling with understanding the rationale of evaluating LCM while adding fractions.

Two situations are covered in the remedial:

1. When denominators are multiples of each other
2. When denominators are co-prime.

**Instructions**

Page is divided into two halves.

On the left all the text will appear and, on the right, the corresponding images.

If there is more than one blank on a screen-then only the top most blank will be active. Once value is entered in the blank then only will the next blank become active.

Students can submit answers in blanks by pressing ENTER.

Negative numbers, decimals and alphabets cannot be entered in the blanks.

0 cannot be entered as the denominator.

Mark the blanks in green border if answered correctly, red if answered incorrectly. After the incorrect reply has been replaced (computer gives away the correct answer) by the correct reply make the border blue.

All the fractions in the module must be displayed in  format.

There are two types of questions- 1 and 2.

Question 1 and question 2 come alternately.

Definition of Q1/2 being considered correct – Only if, the following are correct Q1a, b, c, d, e, f. Otherwise, fail.

Q1 and Q2 must start from new pages. All the sub parts of th question should appear on one page only.

Whenever correct – Prompt number P17 must appear.

Passing criteria

Minimum 3 questions must be correct.

Maximum students get the questions 5 times.

Extra Param

All the values entered in Q1a, b, c, d, e, f.

**FLOWCHART**

|  |  |
| --- | --- |
| i | Incorrect |
| c | correct |
| Almost correct | When the answer entered by the student is a multiple of the actual answer. |

**QUESTIONS**

Q1: John and Pam have a chocolate bar.

John wants to eat frac{num1/den1} of the bar.

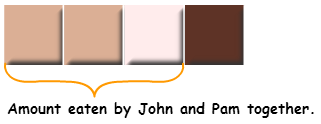
Pam wants to eat frac{num2/den2} of the bar.

Q1a) Into how many equal parts should they divide the bar into? [blank\_1]

Q1b) How many pieces of the chocolate will John get? [blank\_2]

Q1c) How many pieces of the chocolate will Pam get? [blank\_3]

Q1d) What fraction of the chocolate will they eat together? [blank\_4]



Q1e) What fraction of the chocolate was left uneaten? [blank\_5] {appears after P}

Q1f) What is ½ + ¼ ? [blank\_6]

*Value range in Q1*

den1 – (2, 6)

num1 < den1 & lcm(num1, den1) = 1

den2 = 2\* den1 & frac{num2/den2} < frac{num1/den1} & (num2, den2)=1

Q2: John and Pam have a chocolate bar.

John wants to eat frac{num1/den1} of the bar.

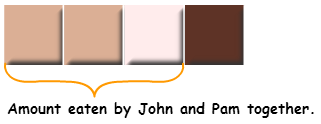
Pam wants to eat frac{num2/den2} of the bar.

Q2a) Into how many equal parts should they divide the bar into? [blank\_1]

Q2b) How many pieces of the chocolate will John get? [blank\_2]

Q2c) How many pieces of the chocolate will Pam get? [blank\_3]

Q2d) What fraction of the chocolate will they eat together? [blank\_4]



Q2e) What fraction of the chocolate was left uneaten? [blank\_5] {appears after P}

Q2f) What is ½ + ¼ ? [blank\_6]

*Value range in Q2*

den1 – (2, 6) (den1, den2) = {(2, 5), (3, 4), (3,5)}

num1 < den1 & lcm(num1, den1) = 1, (num2, den2)=1

Image of chocolate bar on the right.

When value is entered in [blank\_1], the image is divided into those many parts.

Whatever value is entered in [blank\_2], the same number of parts gets shaded in the bar.

Whatever value is entered in [blank\_3], the remaining number of parts of the bar gets shaded.



**Wrong answer prompt:**

P1- Oops! That’s incorrect!

John should get ½ of the bar as shown.

Pam should get ¼ of the bar as shown.

Think of another way to divide the bar.



P2 – Oops! That’s not correct!

Look at the animation carefully to understand the solution.

*Give away the correct answer in [blank\_1]*

P3 – Now write the number of pieces John and Pam should get in the blanks above.

P4 – Check your answer!

See how many pieces make <1/2> in the bar?

P5- John should eat 2 pieces out of 4 equal parts.(give away correct answer in blank\_2)

Now write the number of parts Pam should eat.

(Colour 2 pieces in the bar)



P6 – Pam should eat 1 piece out of 4 equal parts.

(Colour one more brick in the chocolate)



P12 – John and Pam ate 3 out of 4 equal parts of the chocolate.

What fraction of the chocolate did they eat?

Think and write in the blank.

P13 – Oops that’s incorrect!

John and Pam ate 3 out of 4 equal parts of the chocolate.

They ate ¾ of the chocolate.

P14 – Oops that’s incorrect!

1 out of 4 equal parts of the chocolate was left uneaten.

¼ of the chocolate was left uneaten.

P15 – Oops that’s incorrect!

We know, John ate ½ and Pam ate ¼ of a chocolate.

Together they ate ¾ of the chocolate.

So, what is ½ + ¼?

P16 – Oops that’s incorrect!

We know, John ate ½ and Pam ate ¼ of a chocolate.

Together they ate ¾ of the chocolate.

So, ½ + ¼ = ¾.

P17 – Correct! Well done.

P20 – That’s good!

You are quite close to the answer.

See the animation to understand the solution.

**EXTRA PROMPTS**

P7 – If value entered in [blank\_1] is > 20

Oops! That’s too many parts of a chocolate.

Try to give a smaller number.

P8 – If anything except a whole number is entered in the blank –

Please enter the number of pieces in whole numbers only.

P11 – If a whole number is entered in [blank\_4], [blank\_5], [blank\_6]

You have to enter the value in fraction.

P18 – If value entered in [blank\_2] > [blank\_1], then ‘Try again!’

P19 – Oops!

Have you given the correct number of pieces to John and Pam?

Look at the amount of chocolate they should get in the images given.

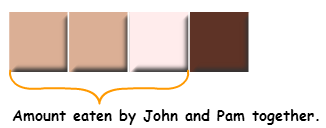
**TEXT**

T1 - We know,



[animation\_1]: Divide the bar into den1 parts. Then divide each part in such a way that the bar is divided into den2 parts.

T2 –



The total number of parts should be a **multiple** of both 2 and 4.

The **least common multiple** of 2 and 4 is 4. So, the number of parts should be 4.