Adding Fractions With a Denominator of 10 and 100

Grade Level: 4

Standards:
Common Core State Standards/CCSS.MATH.CONTENT. 4.NF.C.5
Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.

Objective: Students will be able to identify and express a fraction denominator of 10 as an equivalent fraction with denominator 100 by adding them.

Prior Knowledge: Students should have an understanding of the concepts of basic operations with numbers and relationship between fractions.

New Information: Students are being introduced to the concepts of fraction comparison and fraction multiples.

Activity:
How to Play:
1. Start the lesson activity by watching the introductory video tutorial that walks students through the concept and characteristics of fractions with denominators of 10 and 100.
2. Next, students will be presented with a TAGS activity in which there are 5 additions of fractions, each with blank spaces to complete with the correct number according with the process.
3. Scroll down to pick up tags that are not initially visible from the list.
4. This activity could be used as practice or as a quiz. Students in small groups or working in pairs could be assigned a specific problem set to work on and then to present to their peers.
5. Students could also complete the task presented on individual white-boards or on their own paper and then could check their solution.
6. The accuracy of the answer will be given by the color of the outcome, green is correct, and red is incorrect.

Whole Group Instruction:
1. *Begin the lesson with the attached YouTube video tutorial that walks students through the concept and characteristics of fractions with denominators of 10 and 100, after watching the video it is important that the instructor makes sure that students understand the concepts presented, this could be achieve by asking open and close ended questions as well as modeling some examples that include how to add fractions with denominator 10 and 100. The instructor can ensure that the students learn: a) comparing models and fractions by finding equivalents b) how to verify if the answer of computing*

fractions equivalents is correct. Also, by checking the points presented in the lesson activity, students may answer to the following questions: a) how to compare and find equivalent fractions? b) What's your approach when recognizing factors in order to compare them using models? c) How to add fractions with denominators 10 and 100.

2. *Explain using the whiteboard application in Snowflake how to archive each theme inside their bulleted list.*
3. *Next, start the lesson activity; with the help of students, review the activity, students will be presented with a TAGS activity in which there are 5 additions of fractions, each with blank spaces to complete with the correct number according with the process.*
4. *Scroll down to pick up tags that are not initially visible from the list.*
5. *Students could also complete the task presented on individual whiteboards or on their own paper and then could check their solution.*
6. *This activity could be used as practice or as a quiz. Students in small groups or working in pairs could be assigned a specific problem set to work on and then to present to their peers.*
7. *The accuracy of the answer will be given by the color of the outcome, green is correct, and red is incorrect*
8. *Conclude the lesson by reviewing the correct and incorrect answers that might appear throughout the learning process.*

Independent Practice/Assessment:
1. *This lesson activity can be assigned via Snow.live as a gradable assessment. Students will need to watch the attached video tutorial in order to have their own independent knowledge acquisition.*
2. *Students can complete the lesson activity on their own device as part of remote-instruction or as part of a flipped classroom activity.*
3. *Students can practice by partner up and discuss their solutions. They will compare to see if they came to the same conclusion. If not, they will analyze who is correct and who is not and what misconception caused them to make a mistake.*

Differentiation:

Scaffolded: Additional instruction of simple concepts might be necessary such as multiples, models, factors, improper fractions, and most importantly adding fractions with denominators 10 and 100. If students need more practice with the visualization on how to recognize if a number is correct and properly placed in a number line, then, modeling might be necessary, they should practice this lesson activity in pairs, the concept of a factor might be necessary to be modeled by using real world examples, also let students construct their own visual representation of the numbers or data presented in the lesson activity. Students can also investigate different ways of representing each fraction.

Accelerated: Students could work independently to complete the lesson activity. Students can enter themselves into the understanding the relationship between addition of fractions with denominators 10 and 100 and creating visual representations and also creating real-world scenarios were its necessary to add fractions with denominators 10 and 100 and also, representing fractions as a sum of a unit fraction and/or as a product of a whole number and a unit fraction, these students can pass the statements among each other, and they can try to solve their partner's word problems, note the problem will required to find a model and find different equivalent expressions of that original model, also representation in the number line or model is required. When they are solving problems independently, they can create whichever model they prefer. It is also important, though, that they can interpret different visual representations. Also, students can complete

the worksheet: Adding Fractions with Denominators 10 and 100 (hyperlinked in the materials section of this lesson plan).

For districts that do not have access to YouTube, the instructional video is provided as an Mp4 in the web links.

Content Vocabulary

- Quantity
- Fraction
- Addition
- Equivalence
- Multiplication
- Product
- Denominator
- Numerator
- Improper fraction
- Proper fraction
- Comparison
- Rule
- Value
- Comparison
- Model

Materials

- YouTube video by NUITEQ (a Mathematics instructional that walks students through the concept and characteristics of fractions with denominators of 10 and 100).
  Links:
  - YouTube
  - Mp4

- Worksheet: Adding Fractions with Denominators 10 and 100 (openupresources.org, 2020)

- External practice resources: "CK-12 Interactive Elementary School Math 4" section "Add and Subtract with Common Denominators Word Problems"
- [https://www.ck12.org/c/elementary-math-grade-4/add-and-subtract-with-common-denominators-word-problems/] provided by CK12.org [https://ck12.org].

Follow-Up Activities: Students can demonstrate their understanding of the concepts acquired by sharing concepts.

Partners will be selected to present their solutions and what they learned about this task and this lesson during their discussion.

Additional Snowflake Lesson Activities can be found in the Community. Check out ''Parts of a Whole - Working with Fractions'' Cards lesson activity, ''Comparing and Ordering Fractions'' arrange lesson activity, ''Fractions | Comparing Fractions'' drop lesson activity, ''9 Times Table Spinner'' spinner lesson activity and ''Metric Units of Length'' match lesson activity.

Additional Information: