

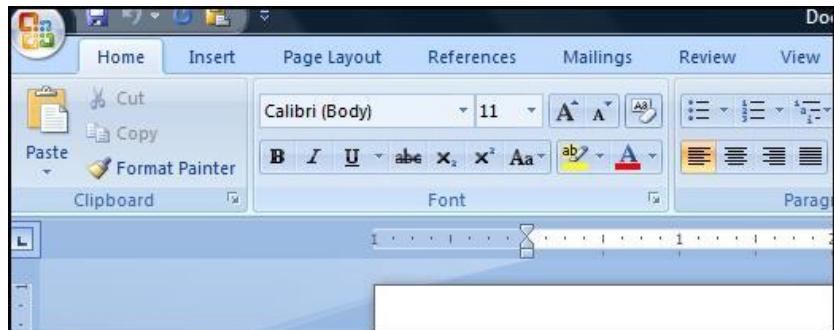
<b>Title:</b>	Fraction Word Problems
<b>Grade(s):</b>	4
<b>Subject(s):</b>	Mathematics
<b>Author:</b>	ICAC team
<b>Overview:</b>	The teacher will engage the students in learning how to write and solve fraction word problems. The students will use the laptop and computer software to write their own fraction word problems. These can then be shared with the class via multimedia.
<b>Content Standards:</b>	<p>MA(4) 4. Demonstrate addition and subtraction of fractions with common denominators.</p> <p>MA(4) 10. Complete addition and subtraction number sentences with a missing addend or subtrahend.</p> <p>TC(3-5) 1. Use input and output devices of technology systems.</p> <p>TC(3-5) 2. Use various technology applications, including word processing and multimedia software.</p> <p>TC(3-5) 12. Create a product using digital tools.</p>
<b>Local/National Standards:</b>	
<b>Primary Learning Objectives:</b>	Using <b>Microsoft Word</b> , students will be able to create and solve word problems involving fractions with common denominators.
<b>Additional Learning Objectives:</b>	Using <b>Microsoft Word</b> , students will demonstrate correct writing mechanics.
<b>Approximate Duration of Lesson:</b>	90 minutes (can be divided up over a period of days if needed).
<b>Materials and Equipment:</b>	Paper and pencil.
<b>Technology Resources Needed:</b>	Desktop or laptop computer, <b>Microsoft Word</b> activity.
<b>Background/Preparation:</b>	Knowledge of how to add and subtract fractions with common denominators. Knowledge of <b>Microsoft Word</b> .
<b>Procedures/Activities:</b>	<p>Step 1 Review the fundamentals of adding and subtracting fractions by reviewing sample word problems involving fractions. Write samples on the board or display them with a Promethean Board or projector. Some sample word problems are:</p> <p>1. If <math>\frac{2}{6}</math> of the class goes to PE and <math>\frac{2}{6}</math> of the class goes to Art, what fraction of the class remains in the classroom? (<i>Answer: <math>\frac{2}{6}</math> of the class remains in the classroom.</i>)</p>

2. Melanie decides to share her pizza with Katie. Melanie eats  $\frac{1}{4}$  of the pizza and Katie eats  $\frac{2}{4}$  of the pizza. What fraction of the pizza is left? (*Answer: There is  $\frac{1}{4}$  of the pizza left.*)

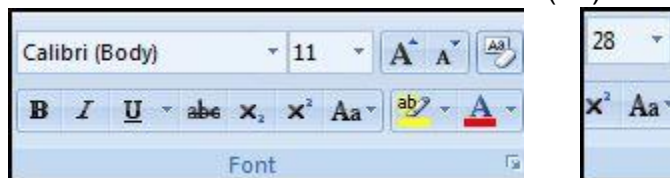
3. Mr. Clark is grading papers. He divides the papers into 8 piles. He grades 3 piles of papers on Monday. On Tuesday, he grades 4 more piles of papers. What fraction of the papers has Mr. Clark graded? (*Answer: Mr. Clark has graded  $\frac{7}{8}$  of the papers.*)

- Step 2 After reviewing the sample word problem with the students, divide the class into small groups of 2-3 students. Each group will need one laptop.
- Step 3 The students will have 30 minutes to create 2 or 3 word problems using **Microsoft Word** on a computer. They will also need to work out the answer to their problems. To access the Word document, click on the Word icon.

**Microsoft Word** should open with this page:



- Step 4 If the students will be presenting their problems using a Promethean Board or a projector, they will need to increase the font size to about "28" so that their problems will be legible on screen. To change the font size, go to the box with the text size number in it and change the number to the size of the desired font (28).



Step 5 Students should save their work on their laptops for review later by clicking on the icon:



The “Save As” option will appear. Students should name their file and click “Save.”

Step 6 Each group will present one of their word problems to the class challenging their classmates to figure out the correct answer.

You may want to structure this as a “Quiz Show” by having students confer with their group, and then have one member of the group give their answer. The first group to answer correctly gets a point. Wrong answers lose one point. You may want to keep track of group scores and offer a prize to the “winner.”

**Attachments:**

**Assessment**

See attached rubric.

**Strategies:**

**Extension:**

Have students create additional word problems for homework. The next day, have them exchange their problems with another group to see if they can solve them.

**Remediation:**

Provide a worksheet to students with several sample problems, explanations of steps for solving the problems, and additional problems for practice.

### Assessment Rubric for Fraction Word Problems

<b>Score:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Participation</b>	No participation in the activity.	Some participation, but didn't work well with the group.	Participated throughout activity, contributed to successful outcome.	Worked well with everyone in group, offered ideas, contributed to successful outcome.
<b>Word Problems</b>	Created less than 2 word problems and/or problems had substantial math errors.	Created 2 or 3 word problems, word problems were not realistic and/or contained 3 – 4 math errors, did not include answers.	Created 2 or 3 realistic word problems but contained 1 or 2 math errors, did not include answers.	Created 3 realistic word problems with answers, math was 100% accurate.
<b>Mechanics</b>	5 or more punctuation or grammatical errors.	3 to 4 punctuation or grammatical errors.	1 or 2 punctuation or grammatical errors.	No punctuation or grammatical errors.