

4th Grade Mathematics



Unit 3: Adding and Subtracting Fractions

**Excerpts from Georgia Department of
Education Webinar September 12, 2012**

Warm-Up

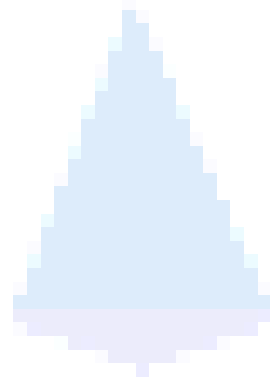
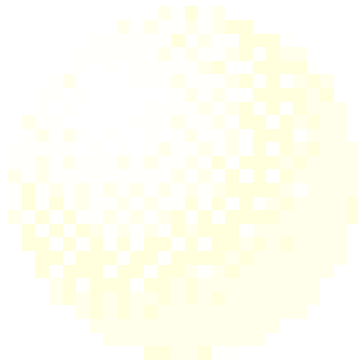
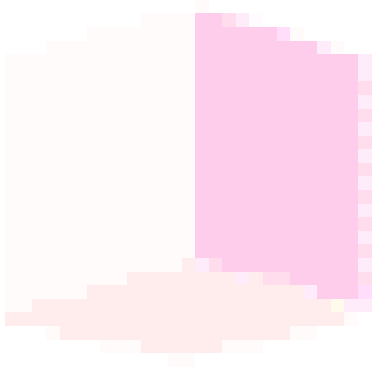
Which of the following sums are equal to $22/17$?

- $5/17 + 4/17 + 3/17 + 10/17$
- $3/17 + 8/17 + 3/17 + 10/17$
- $6/17 + 4/17 + 3/17 + 5/17 + 2/17 + 2/17$
- $12/17 + 10/17$
- $1/17 + 1/17 + 9/17 + 3/17$

Find another way to write $22/17$ as a sum of fractions.

What's the main idea of Unit 3?

- **Addition and subtraction of fractions.**
 - **Deepening understanding of fractions.**



Concepts & Skills to Maintain from Previous Grades

- Identify and give multiple representations for the fractional parts of a whole (area model) or of a set, using halves, thirds, fourths, sixths, eighths, tenths and twelfths.
- Recognize and represent that the denominator determines the number of equally sized pieces that make up a whole.
- Recognize and represent that the numerator determines how many pieces of the whole are being referred to in the fraction.
- Compare fractions with denominators of 2, 3, 4, 6, 10, or 12 using concrete and pictorial models.
- Understand repeated addition is one way to model multiplication, repeated subtraction is one way to model division.
- Recognize that a fraction can be represented in multiple ways by using equivalent fractions (i.e. one half can equal two fourths, three sixths, etc.)

Websites to help with the above:

www.aaamath.com

<http://www.arcademickillbuilders.com/>

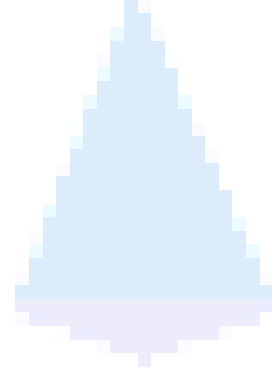
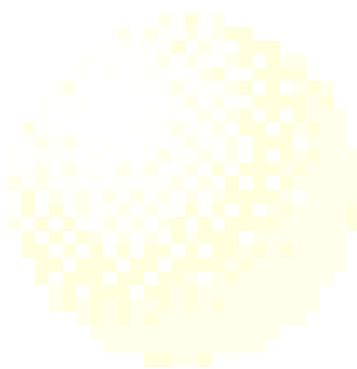
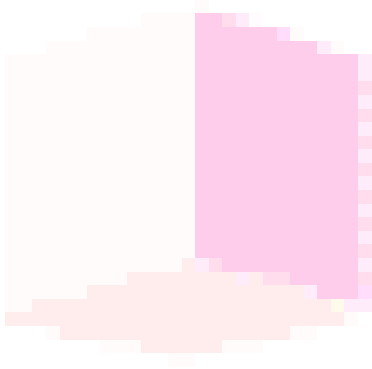
<http://www.jamit.com.au/fraction-games.htm>

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Enduring Understandings from this Unit

- Fractions can be represented visually and in written form.
- Fractional amounts can be added and/or subtracted.
- Mixed numbers can be added and/or subtracted.
- Mixed numbers and improper fractions can be used interchangeably.
- Mixed numbers can be ordered by considering the whole number and the fraction.
- Fractional numbers and mixed numbers can be added and/or subtracted.



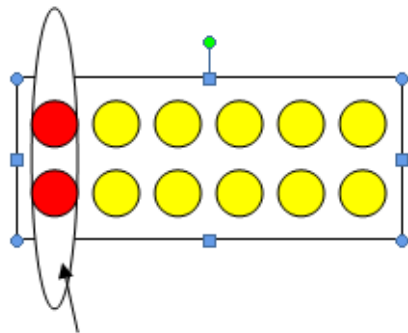
Examples

1. Abigail picked $2 \frac{3}{4}$ pounds of peaches from the tree in her backyard.

She gave $1 \frac{1}{4}$ pounds to her neighbor Madeline. How many pounds of peaches does Abigail have left?

So, $2 \frac{3}{4} - 1 \frac{1}{4} = 1 \frac{2}{4}$ or $1 \frac{1}{2}$

2.



$$: \frac{12}{12} - \frac{1}{12} - \frac{1}{12} = \frac{10}{12} \text{ OR } \frac{12}{12} - \frac{2}{12} = \frac{10}{12}.$$

Additional Resources

http://nlvm.usu.edu/en/nav/frames_asid_203_g_2_t_1.html?from=grade_g_2.html

The student edition for Unit 3 can be found at

<https://www.georgiastandards.org/Common-Core/Pages/Math-K-5.aspx>

On the left side, please look under mathematics, K - 5. Then, the right side has a pull-down menu to access the units.