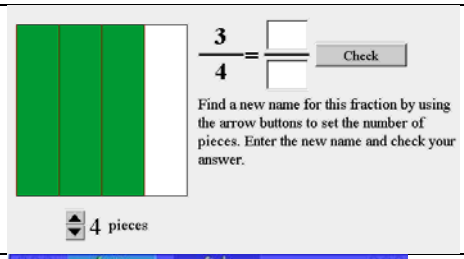
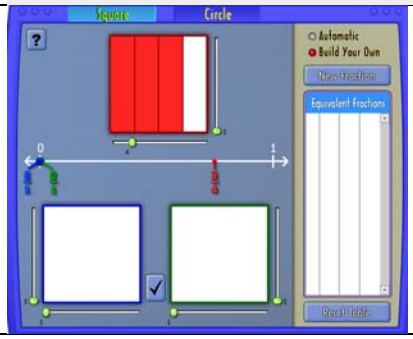
Fractions computer assignment #2

First discussion: NLVM and Illuminations both have a tool that will let you create equivalent fractions. Open them in separate windows.

In the NLVM tool http://nlvm.usu.edu/en/nav/frames_asid_105_g_3_t_1.html click New Fraction until you get a fraction shown in a square form that is in *simplest form*. I got 3/4:	
Make the *same fraction* using the Illuminations tool: http://illuminations.nctm.org/Activity.aspx?id=3510 (choose Square and Build Your Own)	

Make *several equivalent fractions* using both tools.

Repeat this process with a fraction that is not in simplest form.

Be ready to discuss:

- How are the tools similar?
- How are they different?
- What (teaching) advantages does each one have?

Second discussion: Open the NLVM Comparing Fractions tool:
http://nlvm.usu.edu/en/nav/frames_asid_159_g_3_t_1.html

Click New Fractions until you get a pair of fractions whose denominators **do not** have any common factors (like 4 and 7)
Use the tool to find *several pairs* of common denominator fractions. Write down what you found.

Click New Fractions until you get a pair of fractions whose denominators **do** have a common factor (like 4 and 6)
Use the tool to find *several pairs* of common denominator fractions. Write down what you found.

Be ready to discuss:

- How does the tool help you visualize what a common denominator is?
- How are the common denominator forms you found the same and different for pairs whose denominators do or do not have a common factor?

Third discussion: Open the Number Line Bars NLVM tool
http://nlvm.usu.edu/en/nav/frames_asid_265_g_3_t_1.html Click Clear to delete the on-screen instructions (we will not be dividing fractions today).

Show 3/5 + 2/3 by:

- Make 3/5 by making 3 new bars of size 1/5
- Make 2/3 by making 2 new bars of size 1/3
- Put the bars end-to-end along the number line
- Change the step size until it shows a common denominator for the fifths and the thirds.

How many fifteenths are in each 1/5?

What multiplication will tell you how many fifteenths are in 3/5?

How many fifteenths are in each 1/3?

What multiplication will tell you have many fifteenths are in 2/3?

Repeat this process for 3/4 + 5/6.

Be ready to discuss:

- How is this computer tool similar to and different from the other tools?
- How is addition of the two fractions shown in this process?
- How is multiplication part of this process?