PR1 – Virtual Manipulatives

Virtual Manipulatives

Circle O: challenging game where you try to make everything add up to zero; good adding integer practice

Factor Tree: you complete a factor tree and find GCF and LCM

Fraction Adding: adding fraction practice

Fraction Comparing: comparing and ordering fractions

Fraction Equivalent: finding equivalent fractions

Grapher: good demonstration of slope and y-intercept (I have included a little worksheet my students use with this.)

Number Line Bounce: uses arrow diagrams to practice adding and subtraction integers. (Good to use after numline on the TI-73)

Percentage: helps you compute the part, whole, or percent with a visual representation

Sieve of Eratoshenes: can be used to find multiples of numbers or the prime numbers from 1 to 200

Spinner: creates spinners

Turtle: allows you to draw diagrams like the old LOGO programs

Algebra Tiles: multiplies polynomials

Function Machine: practice with patterns

Transformations-Dilations: allows you to create a shape and an image and change both size and position

Transformations-Reflection: demonstrates the properties of reflections

Transformations-Rotation: shows rotation of figures

Box Plot: allows you to demonstrate how a data entry changes a box plot or to create box plots from data

Scatterplot: allows you to plot points and creates a line of best fit
Grapher

Use the National Library of Virtual Manipulatives to do this activity.

Under Grades 6 – 8, open Grapher by clicking on the icon.

Next to f(x) = enter 2x, then hit enter or the graph button on the screen
Click on the functions tab.
Click on g(x)
Enter g(x) = 2x + 3, graph it
Click h(x)
Enter h(x) = 2x - 1, graph it

Complete these questions on a lined sheet of paper.

1. At the value for x = 0, find f(x), g(x), and h(x)?

2. Examine the 3 graphs carefully. Describe what is similar about the 3 lines? What is different about them?

3. Change the coefficient of 2 in each line to -1 and graph these 3 lines. Do the relationships you observed in the first set of graphs still hold? Explain.

Now create the graphs for x + 3, 3x + 3, and -2x + 3

4. At the value for x = 0, find f(x), g(x), and h(x)?

5. Examine the 3 graphs carefully. Describe what is similar about the 3 lines? Different?

6. Change the number 3 in each line to -2 and graph these 3 lines. What do you think the -2 in this set and the 3 in the previous set indicate?

7. What does the coefficient of each function represent?