Math 210A - Fractions with Pattern Blocks

For all problems let 1 =

Addition: 3/4 + 2/3 3/4 =

 2/3 =

Combine these pieces and determine how much it is in relation to the whole.

 This is one whole Trade these for the fewest blocks of one color.

 = 5/12

The answer is 1 5/12

Subtraction: 3/4 - 1/12

 3/4 =

 1/12 =

Take one triangle from the 3 trapezoids. First you need to trade one trapezoid for 3 triangles and then remove one triangle.

What is left? Trade for the fewest blocks of one color to determine how much it is in relation to the whole.

 = 4/6 = 2/3

Multiply: 2/3 x 3/4 Means 2/3 of 3/4 or two of three equal parts of three-fourths.

 3/4 =

Divide this into 3 equal parts and take 2 of them.

This is what part of the whole? Trade for the fewest blocks of one color.

 = = 1/2

Multiply: 1 3/4 x 2/3 Means 1 3/4 of 2/3 or 1 of 2/3 plus three of four equal parts of 2/3.

 2/3 =

 1 group of 2/3 =

To find 3/4 of 2/3 we divide 2/3 into 4 equal parts and take 3 of them.

We now have this:

This is what part of the whole?

 1 1/6

Divide: 3/4 ÷ 1/3 Means how many groups of 1/3 are there is 3/4.

 3/4 =

 1/3 =

Place the 1/3 on top of the 3/4.

Can place 1/3 on top of the 3/4 twice with one triangle left over. The triangle is what part of the 1/3.

 this is 1/4 of 1/3

The answer is 2 1/4

Divide: 2/3 ÷ 3/4 Means how many groups of 3/4 are there in 2/3.

 2/3 =

 3/4 =

2/3 < 3/4 so we now ask 2/3 is what fractional part of 3/4? Trade to cover both figures with fewest blocks of one color.

 2/3 = 8 triangles

 3/4 = 9 triangles

2/3 is 8/9 of 3/4 so the answer is 8/9