Concept: Adding Fractions

Name:

COMPUTER COMPONENT

Instructions: In UMATH X follow the **Content Menu** path:

Fractions > **Adding Fractions**

Work through all Sub Lessons of the following Lessons **in order**:

- *Pattern Blocks*
- *Fraction Strips*
- *Percent Strips*
- *Decimal Strips*
- *The Clock*
- *Adding Fractions on the Number Line*
- *The Lowest Common Denominator*
- *Word Problems*
- *Shapes in a square*
- *Fraction Card Game*
- *Magic Square*

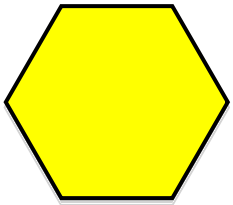
Additional Required Materials: Pattern Blocks

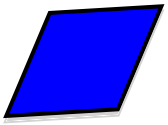
As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

NOTES

1. Pattern blocks are a great tool to assist one in adding fractions.

(a) *Write the value of each pattern block below.*

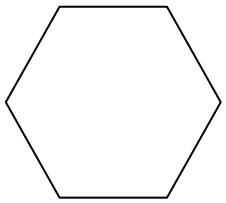




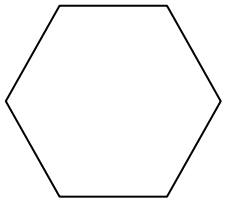
_____ _____ _____ _____

2. Use your knowledge from question 1 to assist you here.

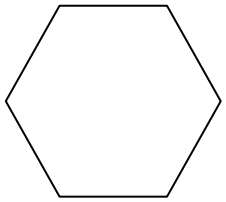
(a) Shade in $\frac{1}{6}$



(b) Shade in $\frac{2}{3} = \frac{\quad}{6}$



(c) Shade in the total of $\frac{1}{6} + \frac{2}{3}$



(d) The result is _____.

Adding Fractions Rules:

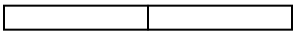
Rule 1:

Rule 2:

Rule 3:

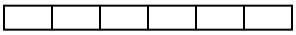
3. Fraction strips are also a great tool that you may use for adding fractions.

(a) Shade in the appropriate region on each strip.

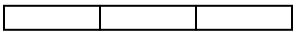


represents $\frac{1}{2}$

or

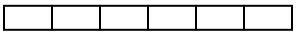


represents $\frac{3}{6}$



represents $\frac{1}{3}$

or



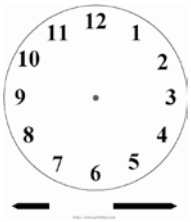
represents $\frac{2}{6}$

(b) Then $\frac{1}{2}+\frac{1}{3} = \frac{3}{6}+\frac{2}{6} = \frac{\quad}{6}$

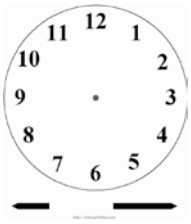
4. The clock also provides a nice visual for adding fractions.

Use your knowledge of clock hands to:

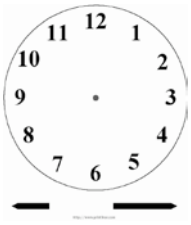
(a) Shade in $\frac{5}{12}$



(b) Shade in $\frac{1}{3}$



(c) Shade in the sum of $\frac{5}{12}+\frac{1}{3}=$



_____.

5. Establishing the Lowest Common Denominator is an example of a strategy used in addition of fractions.

Fill in the following rows of the multiplication table.

x	1	2	3	4	5	6	7	8	9
1									
3									

1									
4									

The lowest common denominator of $\frac{1}{3}$ and $\frac{1}{4}$ is _____.

Therefore $\frac{1}{3}+\frac{1}{4}$ = = =

OFF COMPUTER EXERCISES

1. Review the three rules for adding fractions by re-writing them below.

Rule 1: _____

Rule 2: _____

Rule 3: _____

2. Apply your knowledge of the 'addition of fractions' to add the following.

(a) $\frac{3}{8}+\frac{1}{8}=$ (b) $\frac{2}{11}+\frac{5}{11}=$

(c) $\frac{1}{2}+\frac{3}{10}=$ (d) $\frac{13}{20}+\frac{4}{5}=$

(e) $\frac{4}{7}+\frac{1}{3}=$ (f) $\frac{2}{5}+\frac{3}{4}=$

(g) $\frac{13}{15}+\frac{1}{3}=$ (h) $\frac{1}{4}+\frac{3}{8}=$

(i) $\frac{17}{18}+\frac{1}{6}=$ (j) $\frac{5}{6}+\frac{7}{9}=$

(k) $\frac{3}{4}+\frac{5}{6}=$ (l) $\frac{7}{10}+\frac{2}{3}=$

3. In a grade nine math class, $\frac{5}{14}$ of the class got an A on the math quiz and $\frac{1}{2}$ of the class got a B. *What fraction of the class got either an A or a B?*

4. An old family recipe calls for $\frac{3}{4}$ cup of brown sugar. *How many cups are needed to double the recipe?*

5. In a magic square, the addition of the numbers horizontally, vertically and diagonally gives the same result. We call this result the magic number.

   (a) Find the magic number. _____

   (b) Fill in the empty squares.

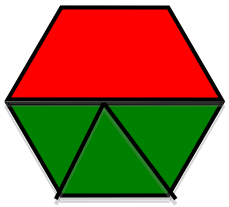
$\frac{3}{4}$	$\frac{33}{24}$	
$\frac{5}{8}$		$\frac{9}{8}$
$\frac{5}{4}$	$\frac{3}{8}$	

6. **Challenge:** *Can you build the Yellow Hexagon?*

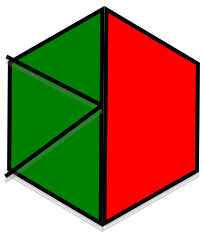
   Materials: Pattern Blocks

   Objective: To find all of the many ways you can build the yellow hexagon from combinations of pattern blocks.

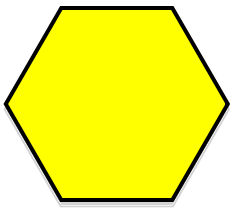
NOTE: *You only count different combinations of blocks.* If you use one red and three greens, that combination counts as one combination regardless of the arrangement.



Therefore, these count as one way!

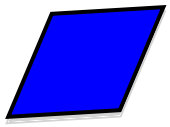


Use fractions to record the different combinations you found.



1 whole

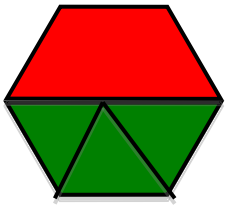
$\frac{1}{2}$



$\frac{1}{3}$

$\frac{1}{6}$

Draw and record your ‘Hexagon Creation’ in the table provided. *How many can you make?*

Hexagon Creation	Pattern Block Combination
1. 	$\frac{1}{2}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}=1$ whole
2.	

7. Find a number that when added to the fraction of $\frac{2}{11}$, the answer is a fraction equivalent to $\frac{1}{2}$.