### Lesson 15 Homework

**A STORY OF UNITS**

Name ___________________________       Date __________________

1. Draw an area model for each pair of fractions, and use it to compare the two fractions by writing >, <, or = on the line. The first two have been partially done for you. Each rectangle represents 1.

<table>
<thead>
<tr>
<th>a. ( \frac{1}{2} )</th>
<th>b. ( \frac{2}{3} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{3}{5} )</td>
<td>( \frac{3}{4} )</td>
</tr>
</tbody>
</table>

\[
1 \times 5 = \frac{5}{5} = \frac{6}{10} \\
2 \times 5 = \frac{10}{10} \\
3 \times 2 = \frac{6}{10} \\
5 \times 2 = \frac{10}{10}
\]

\[
\frac{5}{10} < \frac{6}{10} \text{ so } \frac{1}{2} < \frac{3}{5}
\]

<table>
<thead>
<tr>
<th>c. ( \frac{4}{6} )</th>
<th>d. ( \frac{2}{7} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{5}{8} )</td>
<td>( \frac{3}{5} )</td>
</tr>
</tbody>
</table>

\[
4 \times 8 = \frac{32}{48} \\
6 \times 8 = \frac{48}{48}
\]

\[
5 \times 6 = \frac{30}{48} \\
8 \times 6 = \frac{48}{48}
\]

\[
\frac{32}{48} > \frac{30}{48} \text{ so } \frac{4}{6} > \frac{5}{8}
\]

<table>
<thead>
<tr>
<th>e. ( \frac{4}{6} )</th>
<th>f. ( \frac{4}{5} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{6}{9} )</td>
<td>( \frac{5}{6} )</td>
</tr>
</tbody>
</table>

\[
4 \times 9 = \frac{36}{54} \\
6 \times 9 = \frac{54}{54}
\]

\[
6 \times 6 = \frac{36}{54} \\
9 \times 6 = \frac{54}{54}
\]

\[
\frac{36}{54} = \frac{36}{54} \text{ so } \frac{4}{6} = \frac{5}{6}
\]

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**EUREKA MATH**

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Lesson 15: Find common units or number of units to compare two fractions.
2. Rename the fractions, as needed, using multiplication in order to compare each pair of fractions by writing $>$, $<$, or $=$.
   
   a. $\frac{2}{3} \quad \frac{4}{7}\quad \frac{2}{3} \times \frac{4}{7} = \frac{8}{12}$
      
      $\frac{8}{12} > \frac{6}{12}$
   
   b. $\frac{4}{7} \quad \frac{1}{2}\quad \frac{4}{7} \times \frac{1}{2} = \frac{8}{14}$
      
      $\frac{8}{14} > \frac{7}{14}$
   
   c. $\frac{5}{4} \quad \frac{9}{8}\quad \frac{5}{4} \times \frac{9}{8} = \frac{40}{32}$
      
      $\frac{40}{32} > \frac{36}{32}$
   
   d. $\frac{8}{12} \quad \frac{5}{8}\quad \frac{8}{12} \times \frac{5}{8} = \frac{64}{96}$
      
      $\frac{64}{96} > \frac{60}{96}$
      
      $\frac{5}{12} \times \frac{15}{15} = \frac{60}{96}$

3. Use any method to compare the fractions. Record your answer using $>$, $<$, or $=$.
   
   a. $\frac{8}{9} \quad \frac{2}{3}\quad \frac{8}{9} \times \frac{3}{3} = \frac{24}{27}$
      
      $\frac{24}{27} > \frac{18}{27}$
   
   b. $\frac{4}{7} \quad \frac{4}{5}\quad \frac{4}{7} \times \frac{5}{5} = \frac{20}{35}$
      
      $\frac{20}{35} < \frac{28}{35}$
   
   c. $\frac{3}{2} \quad \frac{9}{6}\quad \frac{3}{2} \times \frac{3}{3} = \frac{9}{6}$
      
      $\frac{9}{6} = \frac{9}{6}$
   
   d. $\frac{11}{7} \quad \frac{5}{3}\quad \frac{11}{7} \times \frac{3}{3} = \frac{33}{21}$
      
      $\frac{33}{21} < \frac{35}{21}$

4. Explain which method you prefer using to compare fractions. Provide an example using words, pictures, or numbers.

   Answers will vary.