Equivalent Fractions Homework

<table>
<thead>
<tr>
<th>Literacy</th>
<th>Research</th>
<th>Memory</th>
</tr>
</thead>
</table>
| \[
\begin{array}{c}
5 \\
7
\end{array}
\]
← Numerator *(number)*
← Denominator *(name/type)* | Where does the word ‘fraction’ originally come from? | • To find an equivalent fraction, multiply or divide the top and bottom by the same thing. |

The denominator tells you the size of the slice (how many a whole one has been cut into) The numerator tells you the number of slices \[
\frac{5}{7}
\]
means 5 slices, where each slice is a seventh.

An equivalent fraction is one with equal value.

<table>
<thead>
<tr>
<th>Skills</th>
<th>Stretch</th>
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</table>

Convert these fractions to equivalent fractions by filling in the gaps:

1) \[
\frac{4}{5} = \frac{8}{[ \quad ]}
\]

2) \[
\frac{12}{17} = \frac{120}{[ \quad ]}
\]

3) \[
\frac{7}{3} = \frac{[ \quad ]}{15} = \frac{[ \quad ]}{30}
\]

Simplify these fractions fully:

4) \[
\frac{12}{30} = \frac{[ \quad ]}{[ \quad ]}
\]

5) \[
\frac{42}{60} = \frac{[ \quad ]}{[ \quad ]}
\]

6) \[
\frac{9000}{27000} = \frac{[ \quad ]}{[ \quad ]}
\]

1) Convert these fractions into equivalent fractions with denominator 12:

\[
\begin{array}{c}
\frac{3}{4} = \frac{[ \quad ]}{12} \\
\frac{2}{3} = \frac{[ \quad ]}{12}
\end{array}
\]

2) Which fraction is larger, \[
\frac{3}{4}
\]
or \[
\frac{2}{3}
\]?

3) Which fraction is larger, \[
\frac{2}{5}
\]
or \[
\frac{1}{3}
\]?

Show ALL your working.

You need to read and learn the Literacy and Memory sections, look up answers to the Research section, answer all questions from the Skills section, and (unless you have already spent more than 45 minutes on this homework) attempt the Stretch section. Answers can be written on the sheet or in your book if you need more space.
Equivalent Fractions Homework SOLUTIONS

**Literacy**

\[
\frac{5}{7} \quad \text{← Numerator (number)}
\]

The denominator tells you the size of the slice (how many a whole one has been cut into).

\[
\frac{5}{7} \quad \text{← Denominator (name/type)}
\]

The numerator tells you the number of slices. \(\frac{5}{7}\) means 5 slices, where each slice is a seventh.

An equivalent fraction is one with equal value.

**Research**

Where does the word ‘fraction’ originally come from?
Latin: ‘fractio’ meaning ‘to break into pieces’ (like ‘fracture’)

Why do you think this word was chosen to describe this type of number?
A fraction is what you get when you break a whole number into pieces.

**Memory**

- To find an equivalent fraction, **multiply or divide** the top and bottom by the same thing.
- To **simplify** a fraction, **divide** the top and bottom by the same thing and keep going until you can’t divide any more. This is the equivalent fraction that uses the smallest numbers.

**Skills**

Convert these fractions to equivalent fractions by filling in the gaps:

1) \(\frac{4}{5} = \frac{8}{[10]}\)

2) \(\frac{12}{17} = \frac{120}{[170]}\)

3) \(\frac{7}{3} = \frac{[35]}{15} = \frac{[70]}{30}\)

Show ALL your working.

**Stretch**

1) Convert these fractions into equivalent fractions with denominator 12:

\[
\frac{3}{4} = \frac{[9]}{12} \quad \frac{2}{3} = \frac{[8]}{12}
\]

2) Which fraction is larger, \(\frac{3}{4}\) or \(\frac{2}{3}\)?

\(\frac{3}{4}\) (more twelfths)

3) Which fraction is larger, \(\frac{2}{5}\) or \(\frac{1}{3}\)?

\(\frac{2}{5} = \frac{6}{15}\) and \(\frac{1}{3} = \frac{5}{15}\) so \(\frac{2}{5}\) is larger (more fifteenths)

You need to read and learn the **Literacy** and **Memory** sections, look up answers to the **Research** section, answer all questions from the **Skills** section, and (unless you have already spent more than 45 minutes on this homework) attempt the **Stretch** section. Answers can be written on the sheet or in your book if you need more space.