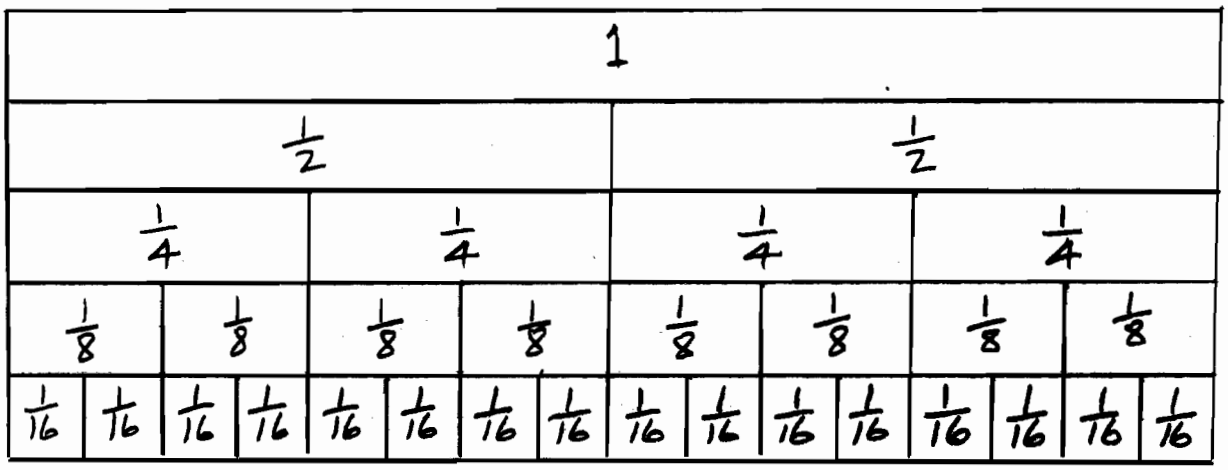
FRACTIONS - EQUIVALENCE, ADDITION AND SUBTRACTION TRANSCRIPT

Equivalent Fractions



$\frac{1}{2} = \frac{2}{4} = \frac{4}{8} = \frac{8}{16}$ $\quad \frac{3}{8} = \frac{6}{16}$ $\quad \frac{5}{8} = \frac{10}{16}$

$\frac{1}{4} = \frac{2}{8} = \frac{4}{16}$ $\quad \frac{3}{4} = \frac{6}{8} = \frac{12}{16}$ $\quad \frac{7}{8} = \frac{14}{16}$

More generally,

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12} = \frac{7}{14} = \frac{8}{16} = \frac{25}{50} = \frac{100}{200}$$

Multiplying the numerator (top) and denominator (bottom) by the same number does not change the value of a fraction.

Similarly, dividing the numerator and denominator by the same number does not change the value of a fraction. This division is called cancelling.

FRACTIONS - EQUIVALENCE, ADDITION AND SUBTRACTION TRANSCRIPT

Equivalent Fractions

$\frac{2}{3} \xrightarrow{\times 3} \frac{6}{9}$ $\quad \frac{2}{3} \xrightarrow{\times 3} \frac{6}{9}$

$\frac{15}{18} \xrightarrow{\div 3} \frac{5}{6}$ $\quad \frac{15}{18} \xrightarrow{\div 3} \frac{5}{6}$

$\frac{4}{5} \xrightarrow{\times 4} \frac{16}{20}$ $\quad \frac{4}{5} \xrightarrow{\times 4} \frac{16}{20}$

$\frac{10}{16} \xrightarrow{\div 2} \frac{5}{8}$ $\quad \frac{10}{16} \xrightarrow{\div 2} \frac{5}{8}$

$\frac{3}{4} \xrightarrow{\times 7} \frac{21}{28}$ $\quad \frac{3}{4} \xrightarrow{\times 7} \frac{21}{28}$

$\frac{15}{25} \xrightarrow{\div 5} \frac{3}{5}$ $\quad \frac{15}{25} \xrightarrow{\div 5} \frac{3}{5}$

Addition and Subtraction of Fractions

1					
$\frac{1}{2}$				$\frac{1}{2}$	
$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$	
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

$$\frac{1}{2} + \frac{1}{3} = \frac{3+2}{6} = \frac{5}{6}$$

$$\frac{2}{3} - \frac{1}{2} = \frac{4-3}{6} = \frac{1}{6}$$

FRACTIONS - EQUIVALENCE, ADDITION AND SUBTRACTION TRANSCRIPT

Addition of Fractions

1. $\frac{1}{4} + \frac{2}{5} = \frac{5+8}{20} = \frac{13}{20}$

2. $\frac{2}{3} + \frac{1}{5} = \frac{10+3}{15} = \frac{13}{15}$

3. $\frac{3}{4} + \frac{1}{6} = \frac{9+2}{12} = \frac{11}{12}$

4. $\frac{4}{5} + \frac{1}{2} = \frac{8+5}{10} = \frac{13}{10} = 1\frac{3}{10}$

5. $\frac{5}{7} + \frac{2}{3} = \frac{15+14}{21} = \frac{29}{21} = 1\frac{8}{21}$

Subtraction of Fractions

1. $\frac{3}{4} - \frac{2}{5} = \frac{15-8}{20} = \frac{7}{20}$

2. $\frac{2}{3} - \frac{1}{4} = \frac{8-3}{12} = \frac{5}{12}$

3. $\frac{2}{5} - \frac{1}{6} = \frac{12-5}{30} = \frac{7}{30}$

4. $\frac{4}{7} - \frac{1}{2} = \frac{8-7}{14} = \frac{1}{14}$

5. $\frac{5}{8} - \frac{1}{4} = \frac{5-2}{8} = \frac{3}{8}$
