

Starting Fraction	Factor Used	Simplified Fraction	Factor Used	Simplified Fraction	Factor Used	Simplified Fraction	Greatest Common Factor of the N and D
$\frac{12}{18}$	2	$\frac{6}{9}$	3	$\frac{2}{3}$			6
$\frac{44}{60}$	2	$\frac{22}{30}$	2	$\frac{11}{15}$			4
$\frac{42}{54}$	2	$\frac{21}{27}$	3	$\frac{7}{9}$			6
$\frac{28}{42}$	2	$\frac{14}{21}$	7	$\frac{2}{3}$			14
$\frac{24}{36}$	2	$\frac{12}{18}$	2	$\frac{6}{9}$	3	$\frac{2}{3}$	12
$\frac{30}{60}$	2	$\frac{15}{30}$	3	$\frac{5}{10}$	5	$\frac{1}{2}$	30
$\frac{168}{210}$	2	$\frac{84}{105}$	3	$\frac{28}{35}$	7	$\frac{4}{5}$	42
$\frac{70}{105}$	5	$\frac{14}{35}$	7	$\frac{2}{5}$			35
$\frac{270}{315}$	3	$\frac{90}{105}$	3	$\frac{30}{35}$	5	$\frac{6}{7}$	45
$\frac{105}{195}$	3	$\frac{35}{65}$	5	$\frac{7}{13}$			35
$\frac{210}{350}$	2	$\frac{105}{175}$	5	$\frac{21}{35}$	7	$\frac{3}{5}$	70
$\frac{210}{462}$	2	$\frac{105}{231}$	3	$\frac{35}{77}$	7	$\frac{5}{11}$	42

Study your chart carefully. Study the shaded columns. What numbers does the calculator use to simplify these fractions?

The calculator uses prime numbers for the factors.

Study the shaded columns. What do you notice about the order in which the factors are chosen?

The calculator uses the prime numbers in numerical order. The calculator tries to simplify with 2 first, then moves to 3, then moves to 5, then moves to 7, etc. The calculator completely factors with 2 and then moves to 3, then to 7, etc. It skips by factors that are not factors of both numerator and denominator.

How can you determine the greatest common factor of the numerator and denominator?

Multiply all the factors together. If the factors are 2, 2, and 3 the greatest common factor is 12.

Starting Fraction	Greatest Common Factor	Simplified Fraction	Points Scored
$\frac{18}{48}$	6	$\frac{3}{8}$	1
$\frac{27}{36}$	9	$\frac{3}{4}$	1
$\frac{56}{72}$	8	$\frac{7}{9}$	1
$\frac{24}{60}$	12	$\frac{2}{5}$	1
$\frac{48}{56}$	8	$\frac{6}{7}$	1
$\frac{40}{100}$	20	$\frac{2}{5}$	1
$\frac{42}{48}$	6	$\frac{7}{8}$	1
$\frac{48}{64}$	16	$\frac{3}{4}$	1
$\frac{36}{72}$	36	$\frac{1}{2}$	1
$\frac{48}{84}$	12	$\frac{4}{7}$	1

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