

Simplifying / Reducing Fractions Review

EQ: How do we reduce/simplify fractions?

To REDUCE or SIMPLIFY a fraction, you must:

- **DIVIDE** *both* the NUMERATOR (*top number*) and the DENOMINATOR (*bottom number*) by the **SAME** number.

○ You can complete it in ONE step if you divide by the **GCF** (greatest common factor)...OR

○ You can complete it in several steps if you divide by smaller factors.

- **REMEMBER:** Whatever number you divide the TOP by, you MUST divide the BOTTOM by the SAME NUMBER!

BE SURE TO USE THE DIVISIBILITY RULES CHART & YOUR MULTIPLICATION CHART TO HELP YOU!!!

Divide by GCF OR

Divide by smaller factors

GCF
1, 2, 4, 8
EX: 1, 2, 3, 4, 6, 12

$$\frac{8}{12} \div \frac{4}{4} = \frac{2}{3}$$

$$\frac{8}{12} \div \frac{2}{2} = \frac{4}{6} \div \frac{2}{2} = \frac{2}{3}$$

1, 3, 9
1, 3, 9, 27

$$\frac{9}{27} \div \frac{9}{9} = \frac{1}{3}$$

$$\frac{9}{27} \div \frac{3}{3} = \frac{3}{9} \div \frac{3}{3} = \frac{1}{3}$$

1, 5, 25, 125
1, 5, 10, 50, 100, 1000
125, 200

$$\frac{125}{1000} \div \frac{125}{125} = \frac{1}{8}$$

$$\frac{125}{1000} \div \frac{5}{5} = \frac{25}{200} \div \frac{5}{5} = \frac{5}{40} \div \frac{5}{5} = \frac{1}{8}$$

1, 2, 4, 17, 34, 68
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$$\frac{68}{144} \div \frac{4}{4} = \frac{17}{36} \quad \frac{68}{144}$$

Divisibility Rules

A number is divisible by...	Divisible	Not Divisible
2 if the last digit is even (0, 2, 4, 6, or 8).	3,978	4,975
3 if the sum of the digits is divisible by 3.	315	139
4 if the last two digits form a number divisible by 4.	8,512	7,518
5 if the last digit is 0 or 5.	14,975	10,978
6 if the number is divisible by both 2 and 3	48	20
9 if the sum of the digits is divisible by 9.	711	93
10 if the last digit is 0.	15,990	10,536