Selfie Fractions: Dottable and Potentiable

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Abstract

*A **dottable fraction** is a proper fraction where multiplication signs can be inserted into numerator and denominator, and the resulting fraction is equal to the original. The same happens with potentiation. In this case we call it **potentiable fraction**. This work brings **dottable fractions** and **dottable fractions with potentiation** in different situations without repetition of digits. The work is limited up to six digits in the denominator.*

1 Introduction

Kieth [3, 4] for the first gave an idea of *dottable fraction*. It is a proper fraction where multiplication signs can be inserted into numerator and denominator, and the resulting fraction is equal to the original. Keith [3, 4] idea was only with multiplication. For the first time, we extended it to other operations also, such as with *addition, multiplication, potentiation,* etc. We can think all of them together also. See below some examples in each case:

- **Addable Fractions**

$$\frac{96}{352}=\frac{9+6}{3+52},\quad \frac{182}{6734}=\frac{18+2}{6+734},\ \text{etc.} \tag{1}$$

- **Subtractable Fractions**

$$\frac{204}{357}=\frac{20-4}{35-7},\quad \frac{726}{1089}=\frac{72-6}{108-9},\ \text{etc.} \tag{2}$$

- **Dottable Fraction**

$$\frac{13}{624}=\frac{1\times 3}{6\times 24},\quad \frac{416}{728}=\frac{4\times 16}{7\times 2\times 8},\ \text{etc.} \tag{3}$$

- **Dottable with Potentiation Fractions**

$$\frac{95}{342}=\frac{9\times 5}{3^4\times 2},\quad \frac{728}{1456}=\frac{7^2\times 8}{14\times 56},\ \text{etc.} \tag{4}$$

- **Mixed Fractions: All Operations**

$$\frac{4980}{5312}=\frac{4-9+80}{5\times(3+1)^2},\quad \frac{3249}{5168}=\frac{(3+2^4)\times 9}{(5-1)\times 68},\ \text{etc.} \tag{5}$$

Observing the examples given in (1)-(5), the numerator and denominator follows the same order of digits in both sides of each fraction. These kind of fractions, we call *Selfie fractions*. There are two types of situations. One when all digits appearing in each fraction are distinct and second, when there are repetitions of digits. Initially, we shall work with distinct digits. Due to big number of fractions, later we shall work with repetitions. This whole work is divided in different parts:

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1. Selfie Fractions: Addable - Equation (1) - [28];
2. Selfie Fractions: Dottable and Pontentiable - this work ;
3. Selfie Fractions: Addable and Dottable Together - [29];
4. Equivalent Selfie Fractions: Dottable, Addable and Subtractable - [30];
5. Equivalent Selfie Fractions: Addable and Dottable Together - [31].

In this paper our aim is to bring examples of (3) and (4), i.e., *dottable fractions* and *dottable fraction with potentiation* where each fraction has different digits. Through out the work the numerator is always less than denominator. We have worked upto six digits in the denominator.

For study on numbers in different situations can be seen in author's work [7]-[27]. For other studies refer to [1, 2, 5, 6].

The principal sections and subsections of the work are as follows:

2 Dottable Fractions: Distinct Digits without Ending in Zero;
3 Dottable Fractions: Distinct Digits Ending in Zero;
3.1 Dottable Fractions with Numerator Ending in Zero;
3.2 Dottable Fractions with Denominator Ending in Zero;
4 Dottable Fractions with Potentiation: Without Ending in Zero;
5 Dottable Fractions with Potentiation: Ending in Zero;
5.1 Dottable Fractions with Potentiation: Numerator Ending in Zero;
5.2 Dottable Fractions with Potentiation: Denominator Ending in Zero.

2 Dottable Fractions: Distinct Digits Without Ending in Zero

In this section we shall present dottable fractions where there is no repetition of digits. The *dottable fractions* multiple of 10 either in numerator or denominator are excluded. These types of fractions are studied in next section 3. We have divided this section in different subsections considering numbers of digits appearing in each expression. In each case, the numerator is always less than denominator. The study is limited up to six digits in denominator. While, Keith [3] gave examples only up to five digits in denominator without splitting result.

2.1 Four Digits

- $\frac{14}{63}=\frac{1\times 4}{6\times 3}$.
- $\frac{15}{24}=\frac{1\times 5}{2\times 4}$.
- $\frac{18}{45}=\frac{1\times 8}{4\times 5}$.

2.2 Five Digits

- $\frac{13}{624}=\frac{1\times 3}{6\times 24}$.
- $\frac{45}{378}=\frac{4\times 5}{3\times 7\times 8}$.
- $\frac{63}{784}=\frac{6\times 3}{7\times 8\times 4}$.
- $\frac{24}{735}=\frac{2\times 4}{7\times 35}$.
- $\frac{48}{675}=\frac{4\times 8}{6\times 75}$.
- $\frac{81}{243}=\frac{8\times 1}{2\times 4\times 3}$.
- $\frac{38}{475}=\frac{3\times 8}{4\times 75}$.
- $\frac{48}{972}=\frac{4\times 8}{9\times 72}$.
- $\frac{83}{249}=\frac{8\times 3}{2\times 4\times 9}$.

2.3 Six Digits

- $\frac{108}{324}=\frac{1\times 08}{3\times 2\times 4}$.
- $\frac{218}{763}=\frac{2\times 18}{7\times 6\times 3}$.
- $\frac{24}{1785}=\frac{2\times 4}{1\times 7\times 85}$.
- $\frac{123}{984}=\frac{12\times 3}{9\times 8\times 4}$.
- $\frac{273}{416}=\frac{2\times 7\times 3}{4\times 16}$.
- $\frac{34}{2958}=\frac{3\times 4}{2\times 9\times 58}$.
- $\frac{164}{287}=\frac{1\times 64}{2\times 8\times 7}$.
- $\frac{308}{924}=\frac{3\times 08}{9\times 2\times 4}$.
- $\frac{39}{1872}=\frac{3\times 9}{18\times 72}$.
- $\frac{164}{328}=\frac{1\times 6\times 4}{3\times 2\times 8}$.
- $\frac{318}{742}=\frac{3\times 1\times 8}{7\times 4\times 2}$.
- $\frac{42}{7938}=\frac{4\times 2}{7\times 9\times 3\times 8}$.
- $\frac{172}{645}=\frac{1\times 72}{6\times 45}$.
- $\frac{328}{615}=\frac{3\times 2\times 8}{6\times 15}$.
- $\frac{49}{3675}=\frac{4\times 9}{36\times 75}$.
- $\frac{182}{364}=\frac{18\times 2}{3\times 6\times 4}$.
- $\frac{416}{728}=\frac{4\times 16}{7\times 2\times 8}$.
- $\frac{65}{1248}=\frac{6\times 5}{12\times 48}$.
- $\frac{182}{637}=\frac{18\times 2}{6\times 3\times 7}$.
- $\frac{416}{832}=\frac{4\times 1\times 6}{8\times 3\times 2}$.
- $\frac{68}{1275}=\frac{6\times 8}{12\times 75}$.
- $\frac{183}{427}=\frac{1\times 8\times 3}{4\times 2\times 7}$.
- $\frac{492}{615}=\frac{4\times 9\times 2}{6\times 15}$.
- $\frac{72}{3456}=\frac{7\times 2}{3\times 4\times 56}$.
- $\frac{186}{372}=\frac{18\times 6}{3\times 72}$.
- $\frac{632}{948}=\frac{6\times 32}{9\times 4\times 8}$.
- $\frac{81}{3645}=\frac{8\times 1}{3\times 6\times 4\times 5}$.
- $\frac{195}{624}=\frac{1\times 9\times 5}{6\times 24}$.
- $\frac{18}{3645}=\frac{1\times 8}{36\times 45}$.
- $\frac{85}{4692}=\frac{8\times 5}{4\times 6\times 92}$.
- $\frac{196}{245}=\frac{1\times 96}{24\times 5}$.
- $\frac{18}{7695}=\frac{1\times 8}{76\times 9\times 5}$.
- $\frac{95}{3648}=\frac{9\times 5}{36\times 48}$.
- $\frac{218}{436}=\frac{2\times 18}{4\times 3\times 6}$.
- $\frac{19}{3648}=\frac{1\times 9}{36\times 48}$.
- $\frac{98}{3675}=\frac{9\times 8}{36\times 75}$.

2.4 Seven Digits

- $\frac{103}{5768}=\frac{10\times 3}{5\times 7\times 6\times 8}$.
- $\frac{124}{9765}=\frac{1\times 24}{9\times 7\times 6\times 5}$.
- $\frac{126}{3948}=\frac{12\times 6}{3\times 94\times 8}$.
- $\frac{154}{9702}=\frac{1\times 5\times 4}{9\times 70\times 2}$.
- $\frac{195}{8736}=\frac{1\times 9\times 5}{8\times 7\times 36}$.
- $\frac{203}{5481}=\frac{20\times 3}{5\times 4\times 81}$.
- $\frac{235}{1974}=\frac{2\times 3\times 5}{1\times 9\times 7\times 4}$.
- $\frac{246}{3895}=\frac{24\times 6}{3\times 8\times 95}$.
- $\frac{259}{1036}=\frac{2\times 5\times 9}{10\times 36}$.
- $\frac{273}{1456}=\frac{2\times 7\times 3}{1\times 4\times 56}$.
- $\frac{276}{9315}=\frac{2\times 7\times 6}{9\times 315}$.
- $\frac{298}{3576}=\frac{2\times 9\times 8}{3\times 576}$.
- $\frac{302}{8154}=\frac{30\times 2}{81\times 5\times 4}$.
- $\frac{305}{2196}=\frac{3\times 05}{2\times 1\times 9\times 6}$.
- $\frac{315}{4872}=\frac{3\times 15}{4\times 87\times 2}$.
- $\frac{315}{6048}=\frac{3\times 1\times 5}{6\times 048}$.
- $\frac{324}{6075}=\frac{3\times 2\times 4}{6\times 075}$.
- $\frac{329}{1645}=\frac{3\times 2\times 9}{1\times 6\times 45}$.
- $\frac{361}{9025}=\frac{36\times 1}{90\times 2\times 5}$.
- $\frac{362}{8145}=\frac{36\times 2}{81\times 4\times 5}$.
- $\frac{369}{1845}=\frac{3\times 6\times 9}{18\times 45}$.
- $\frac{376}{1504}=\frac{3\times 7\times 6}{1\times 504}$.
- $\frac{381}{4572}=\frac{38\times 1}{4\times 57\times 2}$.
- $\frac{396}{2475}=\frac{3\times 96}{24\times 75}$.
- $\frac{413}{2065}=\frac{4\times 1\times 3}{2\times 06\times 5}$.
- $\frac{423}{9165}=\frac{42\times 3}{91\times 6\times 5}$.
- $\frac{425}{1938}=\frac{4\times 25}{19\times 3\times 8}$.
- $\frac{432}{7056}=\frac{4\times 3\times 2}{7\times 056}$.
- $\frac{435}{1827}=\frac{4\times 3\times 5}{18\times 2\times 7}$.
- $\frac{453}{1208}=\frac{4\times 5\times 3}{1\times 20\times 8}$.
- $\frac{476}{2958}=\frac{4\times 7\times 6}{2\times 9\times 58}$.
- $\frac{543}{2896}=\frac{54\times 3}{2\times 8\times 9\times 6}$.
- $\frac{543}{7602}=\frac{5\times 4\times 3}{7\times 60\times 2}$.
- $\frac{549}{1708}=\frac{5\times 4\times 9}{1\times 70\times 8}$.
- $\frac{609}{3248}=\frac{6\times 09}{3\times 2\times 48}$.
- $\frac{645}{8729}=\frac{6\times 4\times 5}{8\times 7\times 29}$.
- $\frac{652}{1304}=\frac{6\times 5\times 2}{1\times 30\times 4}$.
- $\frac{654}{1308}=\frac{6\times 5\times 4}{1\times 30\times 8}$.
- $\frac{728}{1456}=\frac{7\times 2\times 8}{1\times 4\times 56}$.
- $\frac{765}{1428}=\frac{7\times 6\times 5}{14\times 28}$.
- $\frac{782}{1564}=\frac{7\times 8\times 2}{1\times 56\times 4}$.
- $\frac{784}{1365}=\frac{7\times 8\times 4}{13\times 6\times 5}$.
- $\frac{791}{6328}=\frac{7\times 9\times 1}{6\times 3\times 28}$.

- $\frac{792}{3168}=\frac{7\times 9\times 2}{3\times 168}$.
- $\frac{812}{3045}=\frac{8\times 1\times 2}{3\times 04\times 5}$.
- $\frac{813}{4065}=\frac{8\times 1\times 3}{4\times 06\times 5}$.
- $\frac{819}{2457}=\frac{8\times 19}{2\times 4\times 57}$.
- $\frac{872}{1635}=\frac{8\times 7\times 2}{1\times 6\times 35}$.
- $\frac{963}{1284}=\frac{96\times 3}{12\times 8\times 4}$.
- $\frac{972}{3468}=\frac{9\times 72}{34\times 68}$.
- $\frac{982}{1473}=\frac{98\times 2}{14\times 7\times 3}$.
- $\frac{12}{73584}=\frac{1\times 2}{7\times 3\times 584}$.
- $\frac{14}{37065}=\frac{1\times 4}{3\times 706\times 5}$.
- $\frac{15}{27864}=\frac{1\times 5}{27\times 86\times 4}$.
- $\frac{26}{18954}=\frac{2\times 6}{18\times 9\times 54}$.
- $\frac{35}{84672}=\frac{3\times 5}{84\times 6\times 72}$.
- $\frac{43}{19608}=\frac{4\times 3}{1\times 9\times 608}$.
- $\frac{43}{26789}=\frac{4\times 3}{2\times 6\times 7\times 89}$.
- $\frac{63}{59472}=\frac{6\times 3}{59\times 4\times 72}$.
- $\frac{63}{94752}=\frac{6\times 3}{9\times 4\times 752}$.

2.5 Eight Digits

- $\frac{1089}{4235}=\frac{1\times 08\times 9}{4\times 2\times 35}$.
- $\frac{1096}{3425}=\frac{1\times 096}{3\times 4\times 25}$.
- $\frac{1208}{5436}=\frac{1\times 20\times 8}{5\times 4\times 36}$.
- $\frac{1365}{4872}=\frac{1\times 3\times 65}{4\times 87\times 2}$.
- $\frac{1372}{9408}=\frac{1\times 3\times 7\times 2}{9\times 4\times 08}$.
- $\frac{1398}{7456}=\frac{1\times 3\times 98}{7\times 4\times 56}$.
- $\frac{1407}{5829}=\frac{1\times 40\times 7}{5\times 8\times 29}$.
- $\frac{1548}{2709}=\frac{15\times 48}{2\times 70\times 9}$.
- $\frac{1708}{6954}=\frac{1\times 70\times 8}{6\times 95\times 4}$.
- $\frac{1827}{3654}=\frac{18\times 27}{3\times 6\times 54}$.
- $\frac{1854}{2369}=\frac{18\times 54}{23\times 6\times 9}$.
- $\frac{1854}{3296}=\frac{18\times 54}{32\times 9\times 6}$.
- $\frac{1908}{5724}=\frac{19\times 08}{57\times 2\times 4}$.
- $\frac{2019}{5384}=\frac{20\times 1\times 9}{5\times 3\times 8\times 4}$.
- $\frac{2036}{4581}=\frac{20\times 36}{4\times 5\times 81}$.
- $\frac{2045}{9816}=\frac{2\times 045}{9\times 8\times 1\times 6}$.
- $\frac{2078}{4156}=\frac{2\times 07\times 8}{4\times 1\times 56}$.
- $\frac{2098}{3147}=\frac{2\times 098}{3\times 14\times 7}$.
- $\frac{2169}{8435}=\frac{2\times 16\times 9}{8\times 4\times 35}$.
- $\frac{2718}{5436}=\frac{27\times 18}{54\times 3\times 6}$.
- $\frac{2781}{4635}=\frac{27\times 8\times 1}{4\times 6\times 3\times 5}$.
- $\frac{2807}{5614}=\frac{2\times 8\times 07}{56\times 1\times 4}$.
- $\frac{2943}{8175}=\frac{2\times 9\times 4\times 3}{8\times 1\times 75}$.
- $\frac{3042}{6591}=\frac{30\times 42}{6\times 5\times 91}$.
- $\frac{3096}{4128}=\frac{3\times 096}{4\times 12\times 8}$.

- $\frac{3405}{6129} = \frac{3 \times 4 \times 05}{6 \times 1 \times 2 \times 9}.$
- $\frac{3542}{9108} = \frac{35 \times 4 \times 2}{9 \times 10 \times 8}.$
- $\frac{3842}{9605} = \frac{3 \times 8 \times 4 \times 2}{96 \times 05}.$
- $\frac{4516}{9032} = \frac{45 \times 1 \times 6}{90 \times 3 \times 2}.$
- $\frac{4518}{9036} = \frac{45 \times 18}{90 \times 3 \times 6}.$
- $\frac{5418}{6923} = \frac{54 \times 18}{6 \times 9 \times 23}.$
- $\frac{5418}{9632} = \frac{54 \times 18}{9 \times 6 \times 32}.$
- $\frac{6024}{9538} = \frac{60 \times 24}{95 \times 3 \times 8}.$
- $\frac{6145}{9832} = \frac{6 \times 1 \times 45}{9 \times 8 \times 3 \times 2}.$
- $\frac{6741}{8025} = \frac{6 \times 7 \times 4 \times 1}{8 \times 025}.$
- $\frac{105}{78624} = \frac{1 \times 05}{78 \times 6 \times 2 \times 4}.$
- $\frac{109}{62784} = \frac{1 \times 09}{6 \times 27 \times 8 \times 4}.$
- $\frac{124}{63798} = \frac{1 \times 24}{6 \times 3 \times 7 \times 98}.$
- $\frac{135}{27648} = \frac{1 \times 35}{2 \times 7 \times 64 \times 8}.$
- $\frac{138}{27945} = \frac{1 \times 3 \times 8}{27 \times 9 \times 4 \times 5}.$
- $\frac{168}{59472} = \frac{1 \times 6 \times 8}{59 \times 4 \times 72}.$
- $\frac{168}{94752} = \frac{1 \times 6 \times 8}{9 \times 4 \times 752}.$
- $\frac{197}{50432} = \frac{1 \times 9 \times 7}{504 \times 32}.$
- $\frac{205}{63714} = \frac{2 \times 05}{6 \times 37 \times 14}.$
- $\frac{219}{63875} = \frac{21 \times 9}{63 \times 875}.$
- $\frac{243}{86751} = \frac{2 \times 43}{86 \times 7 \times 51}.$
- $\frac{249}{18675} = \frac{2 \times 4 \times 9}{1 \times 8 \times 675}.$
- $\frac{304}{58976} = \frac{30 \times 4}{5 \times 8 \times 97 \times 6}.$
- $\frac{308}{21945} = \frac{3 \times 08}{2 \times 19 \times 45}.$
- $\frac{308}{67914} = \frac{3 \times 08}{6 \times 7 \times 9 \times 14}.$
- $\frac{315}{78624} = \frac{3 \times 1 \times 5}{78 \times 6 \times 2 \times 4} = \frac{3 \times 15}{78 \times 6 \times 24}.$
- $\frac{315}{78624} = \frac{3 \times 15}{78 \times 6 \times 24}.$
- $\frac{362}{19548} = \frac{36 \times 2}{1 \times 9 \times 54 \times 8}.$
- $\frac{368}{27945} = \frac{3 \times 6 \times 8}{27 \times 9 \times 45}.$
- $\frac{402}{15879} = \frac{40 \times 2}{1 \times 5 \times 8 \times 79}.$
- $\frac{403}{82615} = \frac{4 \times 03}{82 \times 6 \times 1 \times 5}.$
- $\frac{432}{71568} = \frac{4 \times 3 \times 2}{7 \times 1 \times 568}.$
- $\frac{436}{19075} = \frac{4 \times 3 \times 6}{1 \times 90 \times 7 \times 5}.$
- $\frac{453}{10268} = \frac{4 \times 5 \times 3}{10 \times 2 \times 68}.$
- $\frac{561}{40392} = \frac{5 \times 6 \times 1}{40 \times 3 \times 9 \times 2}.$
- $\frac{584}{63072} = \frac{5 \times 84}{630 \times 72}.$
- $\frac{601}{53489} = \frac{60 \times 1}{5 \times 3 \times 4 \times 89}.$
- $\frac{701}{36452} = \frac{70 \times 1}{364 \times 5 \times 2}.$
- $\frac{702}{18954} = \frac{70 \times 2}{189 \times 5 \times 4}.$
- $\frac{806}{12493} = \frac{8 \times 06}{1 \times 2 \times 4 \times 93}.$
- $\frac{806}{42315} = \frac{8 \times 06}{4 \times 2 \times 315}.$
- $\frac{836}{21945} = \frac{8 \times 3 \times 6}{21 \times 9 \times 4 \times 5}.$
- $\frac{841}{63075} = \frac{84 \times 1}{6 \times 30 \times 7 \times 5}.$
- $\frac{863}{12945} = \frac{8 \times 6 \times 3}{12 \times 9 \times 4 \times 5}.$
- $\frac{901}{46852} = \frac{90 \times 1}{468 \times 5 \times 2}.$
- $\frac{963}{18725} = \frac{9 \times 6 \times 3}{18 \times 7 \times 25}.$
- $\frac{24}{167835} = \frac{2 \times 4}{1 \times 67 \times 835}.$
- $\frac{26}{189735} = \frac{2 \times 6}{18 \times 973 \times 5}.$
- $\frac{63}{187425} = \frac{6 \times 3}{18 \times 7 \times 425}.$

2.6 Nine Digits

- $\frac{1068}{47259}=\frac{10\times 6\times 8}{472\times 5\times 9}$.
- $\frac{1075}{24983}=\frac{10\times 7\times 5}{2\times 49\times 83}$.
- $\frac{1092}{56784}=\frac{10\times 9\times 2}{5\times 6\times 78\times 4}$.
- $\frac{1206}{87435}=\frac{12\times 06}{87\times 4\times 3\times 5}$.
- $\frac{1264}{57038}=\frac{1\times 2\times 6\times 4}{57\times 038}$.
- $\frac{1296}{37584}=\frac{1\times 296}{37\times 58\times 4}$.
- $\frac{1298}{74635}=\frac{1\times 2\times 98}{7\times 46\times 35}$.
- $\frac{1368}{29754}=\frac{13\times 6\times 8}{2\times 9\times 754}$.
- $\frac{1395}{26784}=\frac{1\times 39\times 5}{2\times 6\times 78\times 4}$.
- $\frac{1395}{46872}=\frac{1\times 39\times 5}{468\times 7\times 2}$.
- $\frac{1546}{80392}=\frac{1\times 5\times 4\times 6}{80\times 39\times 2}$.
- $\frac{1548}{20769}=\frac{15\times 48}{20\times 7\times 69}$.
- $\frac{1548}{62307}=\frac{1\times 5\times 48}{6\times 230\times 7}$.
- $\frac{1602}{58473}=\frac{160\times 2}{5\times 8\times 4\times 73}$.
- $\frac{1608}{47235}=\frac{1\times 6\times 08}{47\times 2\times 3\times 5}$.
- $\frac{1746}{39285}=\frac{1\times 7\times 4\times 6}{3\times 9\times 28\times 5}$.
- $\frac{1807}{63245}=\frac{18\times 07}{6\times 3\times 245}$.
- $\frac{1827}{63945}=\frac{18\times 27}{6\times 3\times 945}$.
- $\frac{1842}{96705}=\frac{1\times 8\times 4\times 2}{96\times 7\times 05}$.
- $\frac{1863}{27945}=\frac{18\times 6\times 3}{27\times 9\times 4\times 5}$.
- $\frac{1924}{36075}=\frac{1\times 9\times 2\times 4}{3\times 6\times 075}$.
- $\frac{2016}{73584}=\frac{20\times 16}{73\times 5\times 8\times 4}$.
- $\frac{2038}{64197}=\frac{2\times 03\times 8}{6\times 4\times 1\times 9\times 7}$.
- $\frac{2081}{93645}=\frac{2\times 081}{9\times 3\times 6\times 45}$.
- $\frac{2403}{56871}=\frac{240\times 3}{5\times 6\times 8\times 71}$.
- $\frac{2594}{10376}=\frac{2\times 5\times 94}{10\times 376}$.
- $\frac{2596}{10384}=\frac{2\times 5\times 96}{10\times 384}$.
- $\frac{2835}{19764}=\frac{2\times 8\times 35}{1\times 976\times 4}$.
- $\frac{3024}{71568}=\frac{30\times 24}{71\times 5\times 6\times 8}$.
- $\frac{3075}{21894}=\frac{30\times 7\times 5}{21\times 89\times 4}$.
- $\frac{3096}{17458}=\frac{3\times 096}{1\times 7\times 4\times 58}$.
- $\frac{3142}{70695}=\frac{3\times 14\times 2}{7\times 06\times 9\times 5}$.
- $\frac{3216}{97485}=\frac{32\times 16}{97\times 4\times 8\times 5}$.
- $\frac{3297}{16485}=\frac{3\times 2\times 97}{1\times 6\times 485}$.
- $\frac{3456}{91728}=\frac{3\times 4\times 56}{91\times 7\times 28}$.
- $\frac{3582}{10746}=\frac{35\times 8\times 2}{10\times 7\times 4\times 6}$.
- $\frac{3609}{74185}=\frac{36\times 09}{74\times 18\times 5}$.
- $\frac{3645}{12798}=\frac{3\times 6\times 4\times 5}{1\times 2\times 79\times 8}$.
- $\frac{3648}{10925}=\frac{3\times 64\times 8}{10\times 92\times 5}$.
- $\frac{3761}{94025}=\frac{376\times 1}{940\times 2\times 5}$.
- $\frac{3841}{96025}=\frac{384\times 1}{960\times 2\times 5}$.
- $\frac{3841}{96025}=\frac{3\times 8\times 4\times 1}{96\times 025}$.
- $\frac{4023}{87165}=\frac{402\times 3}{871\times 6\times 5}$.

- $\frac{4032}{15876}=\frac{40\times 32}{15\times 8\times 7\times 6}.$
- $\frac{4516}{23709}=\frac{45\times 16}{2\times 3\times 70\times 9}.$
- $\frac{4581}{32067}=\frac{45\times 8\times 1}{3\times 20\times 6\times 7}.$
- $\frac{4609}{13827}=\frac{4\times 6\times 09}{1\times 3\times 8\times 27}.$
- $\frac{4635}{12978}=\frac{4\times 6\times 3\times 5}{1\times 2\times 9\times 7\times 8}.$
- $\frac{4692}{31875}=\frac{46\times 9\times 2}{3\times 1875}.$
- $\frac{4968}{12075}=\frac{4\times 9\times 6\times 8}{120\times 7\times 5}.$
- $\frac{5427}{18693}=\frac{54\times 27}{186\times 9\times 3}.$
- $\frac{5823}{40761}=\frac{5\times 8\times 2\times 3}{40\times 7\times 6\times 1}.$
- $\frac{6012}{43587}=\frac{60\times 12}{4\times 3\times 5\times 87}.$
- $\frac{6083}{91245}=\frac{6\times 08\times 3}{9\times 12\times 4\times 5}.$
- $\frac{6183}{92745}=\frac{6\times 18\times 3}{9\times 27\times 4\times 5}.$
- $\frac{6817}{94235}=\frac{68\times 1\times 7}{94\times 2\times 35}.$
- $\frac{7018}{24563}=\frac{70\times 18}{245\times 6\times 3}.$
- $\frac{7056}{18432}=\frac{7\times 056}{1\times 8\times 4\times 32}.$
- $\frac{7418}{25963}=\frac{74\times 18}{259\times 6\times 3}.$
- $\frac{7602}{19548}=\frac{7\times 60\times 2}{1\times 9\times 5\times 48}.$
- $\frac{7836}{21549}=\frac{7\times 8\times 3\times 6}{2\times 154\times 9}.$
- $\frac{7936}{21504}=\frac{7\times 93\times 6}{21\times 504}.$
- $\frac{7938}{64512}=\frac{7\times 9\times 3\times 8}{6\times 4\times 512}.$
- $\frac{8016}{23547}=\frac{80\times 1\times 6}{2\times 3\times 5\times 47}.$
- $\frac{8102}{36459}=\frac{810\times 2}{3\times 6\times 45\times 9}.$
- $\frac{8169}{24507}=\frac{8\times 169}{2\times 4\times 507}.$
- $\frac{8306}{12459}=\frac{8\times 30\times 6}{12\times 4\times 5\times 9}.$
- $\frac{8631}{92475}=\frac{8\times 63\times 1}{9\times 2\times 4\times 75}.$
- $\frac{9036}{18574}=\frac{90\times 36}{18\times 5\times 74}.$
- $\frac{9046}{27138}=\frac{9\times 04\times 6}{27\times 1\times 3\times 8}.$
- $\frac{9156}{73248}=\frac{9\times 1\times 56}{7\times 3\times 24\times 8}.$
- $\frac{9246}{37185}=\frac{9\times 2\times 46}{37\times 18\times 5}.$
- $\frac{102}{539784}=\frac{10\times 2}{5\times 3\times 9\times 784}.$
- $\frac{135}{476928}=\frac{1\times 35}{4\times 7\times 6\times 92\times 8}.$
- $\frac{218}{463795}=\frac{2\times 18}{46\times 37\times 9\times 5}.$
- $\frac{326}{194785}=\frac{3\times 2\times 6}{1\times 9\times 478\times 5}.$
- $\frac{378}{496125}=\frac{3\times 7\times 8}{4\times 9\times 6125}.$
- $\frac{405}{371628}=\frac{4\times 05}{37\times 1\times 62\times 8}.$
- $\frac{418}{963072}=\frac{4\times 18}{9\times 6\times 3072}.$
- $\frac{432}{107856}=\frac{4\times 3\times 2}{1\times 07\times 856}.$
- $\frac{518}{293706}=\frac{5\times 1\times 8}{2\times 9\times 3\times 70\times 6}.$
- $\frac{807}{246135}=\frac{8\times 07}{2\times 4\times 61\times 35}.$
- $\frac{964}{210875}=\frac{9\times 64}{210\times 8\times 75}.$

2.7 Ten Digits

- $\frac{12069}{37548}=\frac{1\times 20\times 6\times 9}{3\times 7\times 5\times 4\times 8}$.
- $\frac{12096}{73584}=\frac{1\times 20\times 96}{73\times 5\times 8\times 4}$.
- $\frac{13548}{27096}=\frac{1\times 3\times 54\times 8}{27\times 096}$.
- $\frac{13608}{45927}=\frac{1\times 3\times 60\times 8}{4\times 5\times 9\times 27}$.
- $\frac{16032}{48597}=\frac{160\times 32}{4\times 8\times 5\times 97}$.
- $\frac{17068}{23594}=\frac{1\times 70\times 68}{2\times 35\times 94}$.
- $\frac{18074}{63259}=\frac{18\times 074}{6\times 3\times 259}$.
- $\frac{18306}{27459}=\frac{18\times 30\times 6}{27\times 4\times 5\times 9}$.
- $\frac{18537}{46092}=\frac{18\times 5\times 37}{460\times 9\times 2}$.
- $\frac{19602}{45738}=\frac{19\times 60\times 2}{4\times 5\times 7\times 38}$.
- $\frac{23046}{79158}=\frac{2\times 30\times 46}{79\times 15\times 8}$.
- $\frac{24759}{61308}=\frac{2\times 4\times 7\times 5\times 9}{6\times 130\times 8}$.
- $\frac{27018}{94563}=\frac{270\times 18}{945\times 6\times 3}$.
- $\frac{27054}{93186}=\frac{27\times 054}{9\times 3\times 186}$.
- $\frac{30168}{52794}=\frac{30\times 1\times 6\times 8}{5\times 2\times 7\times 9\times 4}$.
- $\frac{30186}{45279}=\frac{30\times 18\times 6}{4\times 5\times 27\times 9}$.
- $\frac{30618}{45927}=\frac{30\times 6\times 18}{4\times 5\times 9\times 27}$.
- $\frac{30792}{61584}=\frac{30\times 7\times 9\times 2}{6\times 15\times 84}$.
- $\frac{32064}{79158}=\frac{3\times 20\times 64}{79\times 15\times 8}$.
- $\frac{35784}{69012}=\frac{3\times 5\times 7\times 8\times 4}{6\times 90\times 12}$.
- $\frac{40365}{91287}=\frac{4\times 03\times 65}{9\times 1\times 28\times 7}$.
- $\frac{48516}{97032}=\frac{485\times 1\times 6}{970\times 3\times 2}$.
- $\frac{6057}{193824}=\frac{6\times 057}{19\times 3\times 8\times 24}$.
- $\frac{63018}{94527}=\frac{6\times 30\times 18}{9\times 4\times 5\times 27}$.
- $\frac{74108}{92635}=\frac{7\times 4\times 108}{9\times 2\times 6\times 35}$.
- $\frac{79065}{81324}=\frac{7\times 9\times 06\times 5}{81\times 3\times 2\times 4}$.
- $\frac{1584}{709632}=\frac{15\times 8\times 4}{70\times 96\times 32}$.
- $\frac{1809}{274365}=\frac{1\times 8\times 09}{2\times 7\times 4\times 3\times 65}$.
- $\frac{2406}{318795}=\frac{24\times 06}{3\times 1\times 8\times 795}$.
- $\frac{3087}{496125}=\frac{3\times 08\times 7}{4\times 9\times 6\times 125}$.
- $\frac{3615}{749028}=\frac{3\times 6\times 1\times 5}{74\times 9\times 028}$.
- $\frac{5716}{830249}=\frac{5\times 7\times 16}{830\times 2\times 49}$.
- $\frac{6308}{291745}=\frac{6\times 3\times 08}{2\times 9\times 1\times 74\times 5}$.
- $\frac{7263}{108945}=\frac{72\times 6\times 3}{108\times 9\times 4\times 5}$.
- $\frac{7803}{429165}=\frac{78\times 03}{429\times 1\times 6\times 5}$.

3 Dottable Fractions: Distinct Digits Ending in Zero

In the previous section 2, the *dottable fractions* are written in distinct digits excluding the fractions with either numerator or denominator multiple of 10. These type of fractions are studied here. For example, let us consider the first three *dottable fractions*, $\frac{14}{63}$, $\frac{15}{24}$ and $\frac{18}{45}$ studied above in subsection 2.1. Let us multiply these fractions

by 10 first in numerator and second in denominator, we have new six *dottable fractions* given by

$$\frac{140}{63}, \frac{150}{24}, \frac{180}{45}, \frac{14}{630}, \frac{15}{240}, \frac{18}{450}, \text{ etc.}$$

The same process can be extended for other *dottable fractions*, except those already are with 0. As in this case, there will the repetition of digits. This we have given in two subsections, one for multiple of 10 in numerator and second for multiple of 10 in denominator.

3.1 Dottable Fractions with Numerator Ending in 0

As described above, below are dottable fractions with numerator ending in 0. The fractions are not separated by digits but are in increasing order.

- $\frac{130}{624} = \frac{1 \times 30}{6 \times 24}$.
- $\frac{390}{1872} = \frac{3 \times 90}{18 \times 72}$.
- $\frac{1260}{3948} = \frac{12 \times 60}{3 \times 94 \times 8}$.
- $\frac{240}{735} = \frac{2 \times 40}{7 \times 35}$.
- $\frac{420}{7938} = \frac{4 \times 20}{7 \times 9 \times 3 \times 8}$.
- $\frac{1950}{8736} = \frac{1 \times 9 \times 50}{8 \times 7 \times 36}$.
- $\frac{380}{475} = \frac{3 \times 80}{4 \times 75}$.
- $\frac{490}{3675} = \frac{4 \times 90}{36 \times 75}$.
- $\frac{2460}{3895} = \frac{24 \times 60}{3 \times 8 \times 95}$.
- $\frac{480}{675} = \frac{4 \times 80}{6 \times 75}$.
- $\frac{650}{1248} = \frac{6 \times 50}{12 \times 48}$.
- $\frac{2760}{9315} = \frac{2 \times 7 \times 60}{9 \times 315}$.
- $\frac{480}{972} = \frac{4 \times 80}{9 \times 72}$.
- $\frac{680}{1275} = \frac{6 \times 80}{12 \times 75}$.
- $\frac{2980}{3576} = \frac{2 \times 9 \times 80}{3 \times 576}$.
- $\frac{630}{784} = \frac{6 \times 30}{7 \times 8 \times 4}$.
- $\frac{720}{3456} = \frac{7 \times 20}{3 \times 4 \times 56}$.
- $\frac{3150}{4872} = \frac{3 \times 150}{4 \times 87 \times 2}$.
- $\frac{180}{3645} = \frac{1 \times 80}{36 \times 45}$.
- $\frac{810}{3645} = \frac{8 \times 10}{3 \times 6 \times 4 \times 5}$.
- $\frac{3620}{8145} = \frac{36 \times 20}{81 \times 4 \times 5}$.
- $\frac{180}{7695} = \frac{1 \times 80}{76 \times 9 \times 5}$.
- $\frac{850}{4692} = \frac{8 \times 50}{4 \times 6 \times 92}$.
- $\frac{3810}{4572} = \frac{38 \times 10}{4 \times 57 \times 2}$.
- $\frac{190}{3648} = \frac{1 \times 90}{36 \times 48}$.
- $\frac{950}{3648} = \frac{9 \times 50}{36 \times 48}$.
- $\frac{4230}{9165} = \frac{42 \times 30}{91 \times 6 \times 5}$.
- $\frac{240}{1785} = \frac{2 \times 40}{1 \times 7 \times 85}$.
- $\frac{980}{3675} = \frac{9 \times 80}{36 \times 75}$.
- $\frac{6450}{8729} = \frac{6 \times 4 \times 50}{8 \times 7 \times 29}$.
- $\frac{340}{2958} = \frac{3 \times 40}{2 \times 9 \times 58}$.
- $\frac{1240}{9765} = \frac{1 \times 240}{9 \times 7 \times 6 \times 5}$.
- $\frac{120}{73584} = \frac{1 \times 20}{7 \times 3 \times 584}$.

- $\frac{150}{27864} = \frac{1 \times 50}{27 \times 86 \times 4}.$
- $\frac{260}{18954} = \frac{2 \times 60}{18 \times 9 \times 54}.$
- $\frac{350}{84672} = \frac{3 \times 50}{84 \times 6 \times 72}.$
- $\frac{430}{26789} = \frac{4 \times 30}{2 \times 6 \times 7 \times 89}.$
- $\frac{630}{59472} = \frac{6 \times 30}{59 \times 4 \times 72}.$
- $\frac{630}{94752} = \frac{6 \times 30}{9 \times 4 \times 752}.$
- $\frac{1240}{63798} = \frac{1 \times 240}{6 \times 3 \times 7 \times 98}.$
- $\frac{1350}{27648} = \frac{1 \times 350}{2 \times 7 \times 64 \times 8}.$
- $\frac{1380}{27945} = \frac{1 \times 3 \times 80}{27 \times 9 \times 4 \times 5}.$
- $\frac{1680}{59472} = \frac{1 \times 6 \times 80}{59 \times 4 \times 72}.$
- $\frac{1680}{94752} = \frac{1 \times 6 \times 80}{9 \times 4 \times 752}.$
- $\frac{2190}{63875} = \frac{21 \times 90}{63 \times 875}.$
- $\frac{2430}{86751} = \frac{2 \times 430}{86 \times 7 \times 51}.$
- $\frac{2490}{18675} = \frac{2 \times 4 \times 90}{1 \times 8 \times 675}.$
- $\frac{3150}{78624} = \frac{3 \times 1 \times 50}{78 \times 6 \times 2 \times 4} = \frac{3 \times 150}{78 \times 6 \times 24}.$
- $\frac{3620}{19548} = \frac{36 \times 20}{1 \times 9 \times 54 \times 8}.$
- $\frac{3680}{27945} = \frac{3 \times 6 \times 80}{27 \times 9 \times 45}.$
- $\frac{4320}{71568} = \frac{4 \times 3 \times 20}{7 \times 1 \times 568}.$
- $\frac{8360}{21945} = \frac{8 \times 3 \times 60}{21 \times 9 \times 4 \times 5}.$
- $\frac{8630}{12945} = \frac{8 \times 6 \times 30}{12 \times 9 \times 4 \times 5}.$
- $\frac{9630}{18725} = \frac{9 \times 6 \times 30}{18 \times 7 \times 25}.$
- $\frac{240}{167835} = \frac{2 \times 40}{1 \times 67 \times 835}.$
- $\frac{260}{189735} = \frac{2 \times 60}{18 \times 973 \times 5}.$
- $\frac{630}{187425} = \frac{6 \times 30}{18 \times 7 \times 425}.$
- $\frac{12960}{37584} = \frac{1 \times 2960}{37 \times 58 \times 4}.$
- $\frac{12980}{74635} = \frac{1 \times 2 \times 980}{7 \times 46 \times 35}.$
- $\frac{13680}{29754} = \frac{13 \times 6 \times 80}{2 \times 9 \times 754}.$
- $\frac{13950}{26784} = \frac{1 \times 39 \times 50}{2 \times 6 \times 78 \times 4}.$
- $\frac{13950}{46872} = \frac{1 \times 39 \times 50}{468 \times 7 \times 2}.$
- $\frac{17460}{39285} = \frac{1 \times 7 \times 4 \times 60}{3 \times 9 \times 28 \times 5}.$
- $\frac{18270}{63945} = \frac{18 \times 270}{6 \times 3 \times 945}.$
- $\frac{18630}{27945} = \frac{18 \times 6 \times 30}{27 \times 9 \times 4 \times 5}.$
- $\frac{32160}{97485} = \frac{32 \times 160}{97 \times 4 \times 8 \times 5}.$
- $\frac{34560}{91728} = \frac{3 \times 4 \times 560}{91 \times 7 \times 28}.$
- $\frac{61830}{92745} = \frac{6 \times 18 \times 30}{9 \times 27 \times 4 \times 5}.$
- $\frac{68170}{94235} = \frac{68 \times 1 \times 70}{94 \times 2 \times 35}.$
- $\frac{86310}{92475} = \frac{8 \times 63 \times 10}{9 \times 2 \times 4 \times 75}.$
- $\frac{1350}{476928} = \frac{1 \times 350}{4 \times 7 \times 6 \times 92 \times 8}.$
- $\frac{2180}{463795} = \frac{2 \times 180}{46 \times 37 \times 9 \times 5}.$
- $\frac{3260}{194785} = \frac{3 \times 2 \times 60}{1 \times 9 \times 478 \times 5}.$
- $\frac{3780}{496125} = \frac{3 \times 7 \times 80}{4 \times 9 \times 6125}.$

3.2 Dottable Fractions with Denominator Ending in 0

As described above, below are *dottable fractions* with denominator ending in 0. The fractions are not separated by digits but are in increasing order of number of digits.

- $\frac{14}{630}=\frac{1\times 4}{6\times 30}$.
- $\frac{15}{240}=\frac{1\times 5}{2\times 40}$.
- $\frac{18}{450}=\frac{1\times 8}{4\times 50}$.
- $\frac{24}{150}=\frac{2\times 4}{1\times 50}$.
- $\frac{45}{180}=\frac{4\times 5}{1\times 80}$.
- $\frac{63}{140}=\frac{6\times 3}{1\times 40}$.
- $\frac{243}{810}=\frac{2\times 4\times 3}{8\times 10}$.
- $\frac{249}{830}=\frac{2\times 4\times 9}{8\times 30}$.
- $\frac{378}{450}=\frac{3\times 7\times 8}{4\times 50}$.
- $\frac{13}{6240}=\frac{1\times 3}{6\times 240}$.
- $\frac{24}{7350}=\frac{2\times 4}{7\times 350}$.
- $\frac{38}{4750}=\frac{3\times 8}{4\times 750}$.
- $\frac{45}{3780}=\frac{4\times 5}{3\times 7\times 80}$.
- $\frac{48}{6750}=\frac{4\times 8}{6\times 750}$.
- $\frac{48}{9720}=\frac{4\times 8}{9\times 720}$.
- $\frac{63}{7840}=\frac{6\times 3}{7\times 8\times 40}$.
- $\frac{81}{2430}=\frac{8\times 1}{2\times 4\times 30}$.
- $\frac{83}{2490}=\frac{8\times 3}{2\times 4\times 90}$.
- $\frac{984}{1230}=\frac{9\times 8\times 4}{12\times 30}$.
- $\frac{948}{6320}=\frac{9\times 4\times 8}{6\times 320}$.
- $\frac{832}{4160}=\frac{8\times 3\times 2}{4\times 1\times 60}$.
- $\frac{763}{2180}=\frac{7\times 6\times 3}{2\times 180}$.
- $\frac{742}{3180}=\frac{7\times 4\times 2}{3\times 1\times 80}$.
- $\frac{728}{4160}=\frac{7\times 2\times 8}{4\times 160}$.
- $\frac{645}{1720}=\frac{6\times 45}{1\times 720}$.
- $\frac{637}{1820}=\frac{6\times 3\times 7}{18\times 20}$.
- $\frac{632}{9480}=\frac{6\times 32}{9\times 4\times 80}$.
- $\frac{624}{1950}=\frac{6\times 24}{1\times 9\times 50}$.
- $\frac{615}{4920}=\frac{6\times 15}{4\times 9\times 20}$.
- $\frac{615}{3280}=\frac{6\times 15}{3\times 2\times 80}$.
- $\frac{492}{6150}=\frac{4\times 9\times 2}{6\times 150}$.
- $\frac{489}{3260}=\frac{4\times 8\times 9}{32\times 60}$.
- $\frac{436}{2180}=\frac{4\times 3\times 6}{2\times 180}$.
- $\frac{427}{1830}=\frac{4\times 2\times 7}{1\times 8\times 30}$.
- $\frac{416}{8320}=\frac{4\times 1\times 6}{8\times 3\times 20}$.
- $\frac{416}{7280}=\frac{4\times 16}{7\times 2\times 80}$.
- $\frac{416}{2730}=\frac{4\times 16}{2\times 7\times 30}$.
- $\frac{372}{1860}=\frac{3\times 72}{18\times 60}$.
- $\frac{364}{1820}=\frac{3\times 6\times 4}{18\times 20}$.
- $\frac{328}{6150}=\frac{3\times 2\times 8}{6\times 150}$.
- $\frac{328}{1640}=\frac{3\times 2\times 8}{1\times 6\times 40}$.

- $\frac{318}{7420}=\frac{3\times 1\times 8}{7\times 4\times 20}$.
- $\frac{287}{1640}=\frac{2\times 8\times 7}{1\times 640}$.
- $\frac{273}{4160}=\frac{2\times 7\times 3}{4\times 160}$.
- $\frac{245}{1960}=\frac{24\times 5}{1\times 960}$.
- $\frac{218}{7630}=\frac{2\times 18}{7\times 6\times 30}$.
- $\frac{218}{4360}=\frac{2\times 18}{4\times 3\times 60}$.
- $\frac{196}{2450}=\frac{1\times 96}{24\times 50}$.
- $\frac{195}{6240}=\frac{1\times 9\times 5}{6\times 240}$.
- $\frac{186}{3720}=\frac{18\times 6}{3\times 720}$.
- $\frac{183}{4270}=\frac{1\times 8\times 3}{4\times 2\times 70}$.
- $\frac{182}{6370}=\frac{18\times 2}{6\times 3\times 70}$.
- $\frac{182}{3640}=\frac{18\times 2}{3\times 6\times 40}$.
- $\frac{172}{6450}=\frac{1\times 72}{6\times 450}$.
- $\frac{164}{3280}=\frac{1\times 6\times 4}{3\times 2\times 80}$.
- $\frac{164}{2870}=\frac{1\times 64}{2\times 8\times 70}$.
- $\frac{123}{9840}=\frac{12\times 3}{9\times 8\times 40}$.
- $\frac{18}{36450}=\frac{1\times 8}{36\times 450}$.
- $\frac{18}{76950}=\frac{1\times 8}{76\times 9\times 50}$.
- $\frac{19}{36480}=\frac{1\times 9}{36\times 480}$.
- $\frac{24}{17850}=\frac{2\times 4}{1\times 7\times 850}$.
- $\frac{34}{29580}=\frac{3\times 4}{2\times 9\times 580}$.
- $\frac{39}{18720}=\frac{3\times 9}{18\times 720}$.
- $\frac{42}{79380}=\frac{4\times 2}{7\times 9\times 3\times 80}$.
- $\frac{49}{36750}=\frac{4\times 9}{36\times 750}$.
- $\frac{65}{12480}=\frac{6\times 5}{12\times 480}$.
- $\frac{68}{12750}=\frac{6\times 8}{12\times 750}$.
- $\frac{72}{34560}=\frac{7\times 2}{3\times 4\times 560}$.
- $\frac{81}{36450}=\frac{8\times 1}{3\times 6\times 4\times 50}$.
- $\frac{85}{46920}=\frac{8\times 5}{4\times 6\times 920}$.
- $\frac{95}{36480}=\frac{9\times 5}{36\times 480}$.
- $\frac{98}{36750}=\frac{9\times 8}{36\times 750}$.
- $\frac{124}{97650}=\frac{1\times 24}{9\times 7\times 6\times 50}$.
- $\frac{126}{39480}=\frac{12\times 6}{3\times 94\times 80}$.
- $\frac{195}{87360}=\frac{1\times 9\times 5}{8\times 7\times 360}$.
- $\frac{235}{19740}=\frac{2\times 3\times 5}{1\times 9\times 7\times 40}$.
- $\frac{246}{38950}=\frac{24\times 6}{3\times 8\times 950}$.
- $\frac{273}{14560}=\frac{2\times 7\times 3}{1\times 4\times 560}$.
- $\frac{276}{93150}=\frac{2\times 7\times 6}{9\times 3150}$.
- $\frac{298}{35760}=\frac{2\times 9\times 8}{3\times 5760}$.
- $\frac{315}{48720}=\frac{3\times 15}{4\times 87\times 20}$.
- $\frac{329}{16450}=\frac{3\times 2\times 9}{1\times 6\times 450}$.
- $\frac{362}{81450}=\frac{36\times 2}{81\times 4\times 50}$.
- $\frac{369}{18450}=\frac{3\times 6\times 9}{18\times 450}$.
- $\frac{381}{45720}=\frac{38\times 1}{4\times 57\times 20}$.
- $\frac{396}{24750}=\frac{3\times 96}{24\times 750}$.
- $\frac{423}{91650}=\frac{42\times 3}{91\times 6\times 50}$.

- $\frac{425}{19380}=\frac{4\times 25}{19\times 3\times 80}$.
- $\frac{435}{18270}=\frac{4\times 3\times 5}{18\times 2\times 70}$.
- $\frac{476}{29580}=\frac{4\times 7\times 6}{2\times 9\times 580}$.
- $\frac{543}{28960}=\frac{54\times 3}{2\times 8\times 9\times 60}$.
- $\frac{645}{87290}=\frac{6\times 4\times 5}{8\times 7\times 290}$.
- $\frac{728}{14560}=\frac{7\times 2\times 8}{1\times 4\times 560}$.
- $\frac{765}{14280}=\frac{7\times 6\times 5}{14\times 280}$.
- $\frac{782}{15640}=\frac{7\times 8\times 2}{1\times 56\times 40}$.
- $\frac{784}{13650}=\frac{7\times 8\times 4}{13\times 6\times 50}$.
- $\frac{791}{63280}=\frac{7\times 9\times 1}{6\times 3\times 280}$.
- $\frac{792}{31680}=\frac{7\times 9\times 2}{3\times 1680}$.
- $\frac{819}{24570}=\frac{8\times 19}{2\times 4\times 570}$.
- $\frac{872}{16350}=\frac{8\times 7\times 2}{1\times 6\times 350}$.
- $\frac{963}{12840}=\frac{96\times 3}{12\times 8\times 40}$.
- $\frac{972}{34680}=\frac{9\times 72}{34\times 680}$.
- $\frac{982}{14730}=\frac{98\times 2}{14\times 7\times 30}$.
- $\frac{1284}{9630}=\frac{12\times 8\times 4}{96\times 30}$.
- $\frac{1365}{7840}=\frac{13\times 6\times 5}{7\times 8\times 40}$.
- $\frac{1428}{7650}=\frac{14\times 28}{7\times 6\times 50}$.
- $\frac{1456}{2730}=\frac{1\times 4\times 56}{2\times 7\times 30}$.
- $\frac{1456}{7280}=\frac{1\times 4\times 56}{7\times 2\times 80}$.
- $\frac{1473}{9820}=\frac{14\times 7\times 3}{98\times 20}$.
- $\frac{1564}{7820}=\frac{1\times 56\times 4}{7\times 8\times 20}$.
- $\frac{1635}{8720}=\frac{1\times 6\times 35}{8\times 7\times 20}$.
- $\frac{1645}{3290}=\frac{1\times 6\times 45}{3\times 2\times 90}$.
- $\frac{1827}{4350}=\frac{18\times 2\times 7}{4\times 3\times 50}$.
- $\frac{1845}{3690}=\frac{18\times 45}{3\times 6\times 90}$.
- $\frac{1938}{4250}=\frac{19\times 3\times 8}{4\times 250}$.
- $\frac{1974}{2350}=\frac{1\times 9\times 7\times 4}{2\times 3\times 50}$.
- $\frac{2457}{8190}=\frac{2\times 4\times 57}{8\times 190}$.
- $\frac{2475}{3960}=\frac{24\times 75}{3\times 960}$.
- $\frac{2896}{5430}=\frac{2\times 8\times 9\times 6}{54\times 30}$.
- $\frac{2958}{4760}=\frac{2\times 9\times 58}{4\times 7\times 60}$.
- $\frac{3168}{7920}=\frac{3\times 168}{7\times 9\times 20}$.
- $\frac{3468}{9720}=\frac{34\times 68}{9\times 720}$.
- $\frac{6328}{7910}=\frac{6\times 3\times 28}{7\times 9\times 10}$.
- $\frac{12}{735840}=\frac{1\times 2}{7\times 3\times 5840}$.
- $\frac{15}{278640}=\frac{1\times 5}{27\times 86\times 40}$.
- $\frac{26}{189540}=\frac{2\times 6}{18\times 9\times 540}$.
- $\frac{35}{846720}=\frac{3\times 5}{84\times 6\times 720}$.
- $\frac{43}{267890}=\frac{4\times 3}{2\times 6\times 7\times 890}$.
- $\frac{63}{594720}=\frac{6\times 3}{59\times 4\times 720}$.
- $\frac{63}{947520}=\frac{6\times 3}{9\times 4\times 7520}$.
- $\frac{124}{637980}=\frac{1\times 24}{6\times 3\times 7\times 980}$.
- $\frac{135}{276480}=\frac{1\times 35}{2\times 7\times 64\times 80}$.
- $\frac{1365}{48720}=\frac{1\times 3\times 65}{4\times 87\times 20}$.

- $\frac{138}{279450} = \frac{1 \times 3 \times 8}{27 \times 9 \times 4 \times 50}.$
- $\frac{1398}{74560} = \frac{1 \times 3 \times 98}{7 \times 4 \times 560}.$
- $\frac{168}{594720} = \frac{1 \times 6 \times 8}{59 \times 4 \times 720}.$
- $\frac{168}{947520} = \frac{1 \times 6 \times 8}{9 \times 4 \times 7520}.$
- $\frac{1827}{36540} = \frac{18 \times 27}{3 \times 6 \times 540}.$
- $\frac{1854}{23690} = \frac{18 \times 54}{23 \times 6 \times 90}.$
- $\frac{1854}{32960} = \frac{18 \times 54}{32 \times 9 \times 60}.$
- $\frac{2169}{84350} = \frac{2 \times 16 \times 9}{8 \times 4 \times 350}.$
- $\frac{219}{638750} = \frac{21 \times 9}{63 \times 8750}.$
- $\frac{2369}{18540} = \frac{23 \times 6 \times 9}{18 \times 540}.$
- $\frac{243}{867510} = \frac{2 \times 43}{86 \times 7 \times 510}.$
- $\frac{249}{186750} = \frac{2 \times 4 \times 9}{1 \times 8 \times 6750}.$
- $\frac{2718}{54360} = \frac{27 \times 18}{54 \times 3 \times 60}.$
- $\frac{2781}{46350} = \frac{27 \times 8 \times 1}{4 \times 6 \times 3 \times 50}.$
- $\frac{2943}{81750} = \frac{2 \times 9 \times 4 \times 3}{8 \times 1 \times 750}.$
- $\frac{315}{786240} = \frac{3 \times 1 \times 5}{78 \times 6 \times 2 \times 40} = \frac{3 \times 15}{78 \times 6 \times 240}.$
- $\frac{3296}{18540} = \frac{32 \times 9 \times 6}{18 \times 540}.$
- $\frac{362}{195480} = \frac{36 \times 2}{1 \times 9 \times 54 \times 80}.$
- $\frac{3654}{18270} = \frac{3 \times 6 \times 54}{18 \times 270}.$
- $\frac{368}{279450} = \frac{3 \times 6 \times 8}{27 \times 9 \times 450}.$
- $\frac{432}{715680} = \frac{4 \times 3 \times 2}{7 \times 1 \times 5680}.$
- $\frac{4635}{27810} = \frac{4 \times 6 \times 3 \times 5}{27 \times 8 \times 10}.$
- $\frac{4872}{13650} = \frac{4 \times 87 \times 2}{1 \times 3 \times 650}.$
- $\frac{5418}{69230} = \frac{54 \times 18}{6 \times 9 \times 230}.$
- $\frac{5418}{96320} = \frac{54 \times 18}{9 \times 6 \times 320}.$
- $\frac{5436}{27180} = \frac{54 \times 3 \times 6}{27 \times 180}.$
- $\frac{6145}{98320} = \frac{6 \times 1 \times 45}{9 \times 8 \times 3 \times 20}.$
- $\frac{6923}{54180} = \frac{6 \times 9 \times 23}{54 \times 180}.$
- $\frac{7456}{13980} = \frac{7 \times 4 \times 56}{1 \times 3 \times 980}.$
- $\frac{8175}{29430} = \frac{8 \times 1 \times 75}{2 \times 9 \times 4 \times 30}.$
- $\frac{836}{219450} = \frac{8 \times 3 \times 6}{21 \times 9 \times 4 \times 50}.$
- $\frac{8435}{21690} = \frac{8 \times 4 \times 35}{2 \times 16 \times 90}.$
- $\frac{863}{129450} = \frac{8 \times 6 \times 3}{12 \times 9 \times 4 \times 50}.$
- $\frac{963}{187250} = \frac{9 \times 6 \times 3}{18 \times 7 \times 250}.$
- $\frac{9632}{54180} = \frac{9 \times 6 \times 32}{54 \times 180}.$
- $\frac{9832}{61450} = \frac{9 \times 8 \times 3 \times 2}{6 \times 1 \times 450}.$
- $\frac{12798}{36450} = \frac{1 \times 2 \times 79 \times 8}{3 \times 6 \times 4 \times 50}.$
- $\frac{1296}{375840} = \frac{1 \times 296}{37 \times 58 \times 40}.$
- $\frac{12978}{46350} = \frac{1 \times 2 \times 9 \times 7 \times 8}{4 \times 6 \times 3 \times 50}.$
- $\frac{1298}{746350} = \frac{1 \times 2 \times 98}{7 \times 46 \times 350}.$
- $\frac{1368}{297540} = \frac{13 \times 6 \times 8}{2 \times 9 \times 7540}.$
- $\frac{1395}{267840} = \frac{1 \times 39 \times 5}{2 \times 6 \times 78 \times 40}.$
- $\frac{1395}{468720} = \frac{1 \times 39 \times 5}{468 \times 7 \times 20}.$
- $\frac{16485}{32970} = \frac{1 \times 6 \times 485}{3 \times 2 \times 970}.$
- $\frac{1746}{392850} = \frac{1 \times 7 \times 4 \times 6}{3 \times 9 \times 28 \times 50}.$

- $\frac{1827}{639450}=\frac{18\times 27}{6\times 3\times 9450}$.
- $\frac{1863}{279450}=\frac{18\times 6\times 3}{27\times 9\times 4\times 50}$.
- $\frac{18693}{54270}=\frac{186\times 9\times 3}{54\times 270}$.
- $\frac{19764}{28350}=\frac{1\times 976\times 4}{2\times 8\times 350}$.
- $\frac{21549}{78360}=\frac{2\times 154\times 9}{7\times 8\times 3\times 60}$.
- $\frac{25963}{74180}=\frac{259\times 6\times 3}{74\times 180}$.
- $\frac{2835}{197640}=\frac{2\times 8\times 35}{1\times 976\times 40}$.
- $\frac{31875}{46920}=\frac{3\times 1875}{46\times 9\times 20}$.
- $\frac{3216}{974850}=\frac{32\times 16}{97\times 4\times 8\times 50}$.
- $\frac{3297}{164850}=\frac{3\times 2\times 97}{1\times 6\times 4850}$.
- $\frac{3456}{917280}=\frac{3\times 4\times 56}{91\times 7\times 280}$.
- $\frac{3645}{127980}=\frac{3\times 6\times 4\times 5}{1\times 2\times 79\times 80}$.
- $\frac{37185}{92460}=\frac{37\times 18\times 5}{9\times 2\times 460}$.
- $\frac{4635}{129780}=\frac{4\times 6\times 3\times 5}{1\times 2\times 9\times 7\times 80}$.
- $\frac{4692}{318750}=\frac{46\times 9\times 2}{3\times 18750}$.
- $\frac{5427}{186930}=\frac{54\times 27}{186\times 9\times 30}$.
- $\frac{6183}{927450}=\frac{6\times 18\times 3}{9\times 27\times 4\times 50}$.
- $\frac{6817}{942350}=\frac{68\times 1\times 7}{94\times 2\times 350}$.
- $\frac{73248}{91560}=\frac{7\times 3\times 24\times 8}{9\times 1\times 560}$.
- $\frac{7418}{259630}=\frac{74\times 18}{259\times 6\times 30}$.
- $\frac{7836}{215490}=\frac{7\times 8\times 3\times 6}{2\times 154\times 90}$.
- $\frac{7938}{645120}=\frac{7\times 9\times 3\times 8}{6\times 4\times 5120}$.
- $\frac{8631}{924750}=\frac{8\times 63\times 1}{9\times 2\times 4\times 750}$.
- $\frac{9156}{732480}=\frac{9\times 1\times 56}{7\times 3\times 24\times 80}$.
- $\frac{9246}{371850}=\frac{9\times 2\times 46}{37\times 18\times 50}$.

Most of the work done above is with 6 digits in denominator, while numerator is always less than denominator. Still, we can write some numbers with 7 digits in denominator. See below:

- $\frac{24}{1678350}=\frac{2\times 4}{1\times 67\times 8350}$.
- $\frac{26}{1897350}=\frac{2\times 6}{18\times 973\times 50}$.
- $\frac{63}{1874250}=\frac{6\times 3}{18\times 7\times 4250}$.
- $\frac{135}{4769280}=\frac{1\times 35}{4\times 7\times 6\times 92\times 80}$.
- $\frac{218}{4637950}=\frac{2\times 18}{46\times 37\times 9\times 50}$.
- $\frac{326}{1947850}=\frac{3\times 2\times 6}{1\times 9\times 478\times 50}$.
- $\frac{378}{4961250}=\frac{3\times 7\times 8}{4\times 9\times 61250}$.

4 Dottable Fractions with Potentiation: Without Ending in Zero

Based on similar idea of *dottable fractions*, below are fractions where in some cases representations are in terms of potentiation. We don't have any fraction just with potentiation. These are mixed with products and exponents. No repetition of digits are considered.

- $\frac{13}{208}=\frac{1^3}{2\times 08}.$
- $\frac{13}{624}=\frac{1^3}{6\times 2\times 4}.$
- $\frac{15}{432}=\frac{1\times 5}{(4\times 3)^2}.$
- $\frac{17}{306}=\frac{1^7}{3\times 06}.$
- $\frac{18}{432}=\frac{1^8}{4\times 3\times 2}.$
- $\frac{19}{342}=\frac{1\times 9}{3^4\times 2}.$
- $\frac{24}{675}=\frac{2^4}{6\times 75}.$
- $\frac{42}{189}=\frac{4^2}{1\times 8\times 9}.$
- $\frac{95}{342}=\frac{9\times 5}{3^4\times 2}.$
- $\frac{14}{9072}=\frac{1^4}{9\times 072}.$
- $\frac{16}{2048}=\frac{1^6}{2^{04}\times 8}.$
- $\frac{18}{7056}=\frac{1^8}{7\times 056}.$
- $\frac{19}{3724}=\frac{1\times 9}{(3\times 7)^2\times 4}.$
- $\frac{23}{4968}=\frac{2^3}{4\times 9\times 6\times 8}.$
- $\frac{34}{2176}=\frac{3\times 4}{2^{1\times 7}\times 6}.$
- $\frac{42}{1785}=\frac{4^2}{17\times 8\times 5}.$
- $\frac{61}{3294}=\frac{6\times 1}{3^2\times 9\times 4}.$
- $\frac{95}{3724}=\frac{9\times 5}{(3\times 7)^2\times 4}.$
- $\frac{98}{1764}=\frac{9\times 8}{1^7\times 6^4}.$
- $\frac{204}{918}=\frac{2^{04}}{9\times 1\times 8}.$
- $\frac{234}{975}=\frac{2\times 3^4}{9\times 75}.$
- $\frac{256}{784}=\frac{2^5\times 6}{7\times 84}.$
- $\frac{326}{489}=\frac{3\times 2^6}{4\times 8\times 9}.$
- $\frac{385}{462}=\frac{3\times 8\times 5}{4\times 6^2}.$
- $\frac{428}{963}=\frac{4^2\times 8}{96\times 3}.$
- $\frac{832}{975}=\frac{(8\times 3)^2}{9\times 75}.$
- $\frac{127}{3048}=\frac{1\times 27}{3^{04}\times 8}.$
- $\frac{168}{4032}=\frac{1^{68}}{4\times 03\times 2}.$
- $\frac{169}{3042}=\frac{1^6\times 9}{3^{04}\times 2}.$
- $\frac{169}{4732}=\frac{1^6\times 9}{4\times 7\times 3^2}.$
- $\frac{175}{3024}=\frac{1\times 75}{(3\times 02)^4}.$
- $\frac{194}{2037}=\frac{1^9\times 4}{2\times 03\times 7}.$
- $\frac{198}{6237}=\frac{1^9\times 8}{6\times 2\times 3\times 7}.$
- $\frac{204}{1836}=\frac{2^{04}}{1\times 8\times 3\times 6}.$
- $\frac{207}{4968}=\frac{2^{07}}{4\times 96\times 8}.$
- $\frac{236}{1475}=\frac{2^3\times 6}{1\times 4\times 75}.$
- $\frac{342}{5168}=\frac{3^4\times 2}{51\times 6\times 8}.$
- $\frac{371}{8904}=\frac{3^7\times 1}{8\times 9^{04}}.$
- $\frac{402}{3618}=\frac{4^{02}}{3\times 6\times 1\times 8}.$
- $\frac{413}{2065}=\frac{4^{1\times 3}}{2^{06}\times 5}.$
- $\frac{432}{1785}=\frac{(4\times 3)^2}{1\times 7\times 85}.$
- $\frac{498}{6723}=\frac{4\times 98}{(6\times 7)^2\times 3}.$
- $\frac{703}{4921}=\frac{7^{03}}{49^2\times 1}.$
- $\frac{728}{1456}=\frac{7^2\times 8}{14\times 56}.$

- $\frac{791}{2034}=\frac{7\times 9\times 1}{2\times (03)^4}.$
- $\frac{807}{5649}=\frac{8^{07}}{56\times 4^9}.$
- $\frac{815}{2934}=\frac{81\times 5}{2\times 9\times 3^4}.$
- $\frac{872}{1635}=\frac{8\times 72}{1\times 6^3\times 5}.$
- $\frac{904}{8136}=\frac{9^{04}}{81\times 3^6}.$
- $\frac{906}{4832}=\frac{9\times 06}{4\times 8\times 3^2}.$
- $\frac{908}{1362}=\frac{9\times 08}{1\times 3\times 6^2}.$
- $\frac{918}{3264}=\frac{9\times 18}{3^2\times 64}.$
- $\frac{923}{4615}=\frac{9\times 2^3}{4\times 6\times 15}.$
- $\frac{18}{59472}=\frac{1^8}{59\times 4\times 7\times 2}.$
- $\frac{24}{10935}=\frac{2\times 4}{1\times 09^3\times 5}.$
- $\frac{42}{30618}=\frac{4\times 2}{3^{06}\times 1\times 8}.$
- $\frac{43}{26789}=\frac{4^3}{2^6\times 7\times 89}.$
- $\frac{46}{58029}=\frac{4\times 6}{58^02\times 9}.$
- $\frac{64}{18792}=\frac{6\times 4}{1\times 87\times 9^2}.$
- $\frac{69}{13248}=\frac{6\times 9}{1\times (3\times 2)^4\times 8}.$
- $\frac{1435}{6027}=\frac{1\times 4\times 3\times 5}{6^{02}\times 7}.$
- $\frac{1495}{8372}=\frac{14\times 9\times 5}{8\times (3\times 7)^2}.$
- $\frac{1638}{2457}=\frac{16\times 38}{2^4\times 57}.$
- $\frac{1647}{8235}=\frac{16\times 4^7}{8^{2\times 3}\times 5}=\frac{1\times 64\times 7}{8^2\times 35}.$
- $\frac{1729}{8645}=\frac{1^7\times 2^9}{8\times 64\times 5}.$
- $\frac{1785}{2346}=\frac{1\times 7\times 8\times 5}{2^3\times 46}.$
- $\frac{1809}{6432}=\frac{18\times 09}{64\times 3^2}.$
- $\frac{1823}{5469}=\frac{18^2\times 3}{54\times 6\times 9}.$
- $\frac{1854}{2369}=\frac{1\times 8\times 54}{2^3\times 69}.$
- $\frac{1863}{7245}=\frac{1^8\times 6^3}{7\times 24\times 5}.$
- $\frac{1863}{7245}=\frac{1\times 8\times 6\times 3}{7\times 2^4\times 5}.$
- $\frac{1926}{3745}=\frac{1\times 9^2\times 6}{3\times 7\times 45}.$
- $\frac{2045}{3681}=\frac{2^{04}\times 5}{3\times 6\times 8\times 1}.$
- $\frac{2947}{6315}=\frac{2\times 9\times 4\times 7}{6^3\times 1\times 5}.$
- $\frac{2987}{4635}=\frac{2^9\times 87}{(4\times 6)^3\times 5}.$
- $\frac{3054}{9162}=\frac{3^{05}\times 4}{(9\times 1\times 6)^2}.$
- $\frac{3168}{9702}=\frac{3\times 1\times 6\times 8}{9\times 7^{02}}.$
- $\frac{3182}{9546}=\frac{3\times 18^2}{9\times 54\times 6}.$
- $\frac{3618}{9045}=\frac{3^6\times 18}{9^{04}\times 5}.$
- $\frac{3724}{5168}=\frac{(3\times 7)^2\times 4}{51\times 6\times 8}.$
- $\frac{3816}{5724}=\frac{38\times 16}{57\times 2^4}.$
- $\frac{3924}{8175}=\frac{(3\times 9)^2\times 4}{81\times 75}.$
- $\frac{4138}{6207}=\frac{4^{1\times 3}\times 8}{6\times 2^{07}}.$
- $\frac{4256}{8379}=\frac{4\times 2^5\times 6}{8\times 3\times 7\times 9}.$
- $\frac{5418}{6923}=\frac{54\times 1\times 8}{69\times 2^3}.$
- $\frac{6158}{9237}=\frac{6^{(1^{58})}}{9\times (2\times 3)^7}.$
- $\frac{8035}{9642}=\frac{80\times 3^5}{9\times 6^4\times 2}.$
- $\frac{135}{84672}=\frac{1\times 3\times 5}{8\times 4\times 6\times 7^2}.$

- $\frac{148}{37296} = \frac{14^{8}}{3 \times (7 \times 2)^{9} \times 6}.$
- $\frac{158}{79632} = \frac{1^{5} \times 8}{7 \times 96 \times 3 \times 2}.$
- $\frac{187}{40392} = \frac{1^{87}}{4 \times 03 \times 9 \times 2}.$
- $\frac{216}{38475} = \frac{2^{1 \times 6}}{3 \times 8 \times 475}.$
- $\frac{235}{71064} = \frac{2 \times 3 \times 5}{7 \times 1 \times (06)^{4}}.$
- $\frac{243}{86751} = \frac{2^{4} \times 3}{8 \times 6 \times 7 \times 51}.$
- $\frac{306}{14875} = \frac{3 \times 06}{1^{4} \times 875}.$
- $\frac{328}{19475} = \frac{3^{2} \times 8}{1 \times 9 \times 475}.$
- $\frac{402}{13869} = \frac{4^{02}}{1^{3} \times 8 \times 69}.$
- $\frac{402}{15879} = \frac{4^{02}}{1^{5} \times 8 \times 79}.$
- $\frac{402}{37185} = \frac{4^{02}}{37 \times 1 \times 8 \times 5}.$
- $\frac{405}{12798} = \frac{4 \times (05)}{1^{2} \times 79 \times 8}.$
- $\frac{603}{18492} = \frac{6^{03}}{18 \times 4 \times 92}.$
- $\frac{603}{29748} = \frac{6^{03}}{2 \times 9 \times 74 \times 8}.$
- $\frac{681}{42903} = \frac{6 \times 81}{42 \times 9^{03}}.$
- $\frac{689}{72345} = \frac{6 \times 8 \times 9}{7 \times (2 \times 3)^{4} \times 5}.$
- $\frac{728}{39546} = \frac{7^{2} \times 8}{39 \times 546}.$
- $\frac{814}{76923} = \frac{8 \times 1 \times 4}{7 \times 6 \times 9 \times 2^{3}}.$
- $\frac{945}{30618} = \frac{9 \times 4 \times 5}{3^{06} \times 1 \times 8}.$
- $\frac{945}{30618} = \frac{9 \times 45}{3^{06} \times 18}.$
- $\frac{23}{105984} = \frac{2^{3}}{1^{05} \times 9 \times 8^{4}}.$
- $\frac{23}{795846} = \frac{2^{3}}{79 \times 584 \times 6}.$
- $\frac{23}{905418} = \frac{2 \times 3}{9^{05} \times 4^{(18)}}.$
- $\frac{95}{172368} = \frac{9 \times 5}{1 \times 7 \times 2 \times 3^{6} \times 8}.$
- $\frac{1567}{42309} = \frac{1^{5} \times 6 \times 7}{42 \times 3 \times 09}.$
- $\frac{1593}{84672} = \frac{1 \times 59 \times 3}{8 \times 4 \times 6 \times 7^{2}}.$
- $\frac{1683}{42075} = \frac{1^{6} \times 8 \times 3}{4 \times 2 \times 075}.$
- $\frac{1809}{47235} = \frac{1 \times 8 \times 09}{47 \times 2^{3} \times 5}.$
- $\frac{1894}{23675} = \frac{1 \times 8 \times 9 \times 4}{2^{3} \times 6 \times 75}.$
- $\frac{1924}{36075} = \frac{1 \times 9 \times 2^{4}}{36 \times 075}.$
- $\frac{2596}{10384} = \frac{2^{5} \times 96}{1 \times 03 \times 8^{4}}.$
- $\frac{2679}{40185} = \frac{2 \times 6^{7} \times 9}{40 \times 18^{5}}.$
- $\frac{3078}{14592} = \frac{3^{07} \times 8}{1 \times 4^{5} \times 9^{2}}.$
- $\frac{3187}{25496} = \frac{3 \times 1 \times 8^{7}}{2^{5} \times 4^{9} \times 6}.$
- $\frac{3294}{17568} = \frac{3 \times (2 \times 9)^{4}}{1^{75} \times 6^{8}}.$
- $\frac{3617}{90425} = \frac{36^{(17)}}{9 \times 04 \times 25}.$
- $\frac{3857}{10962} = \frac{3^{8} \times 57}{1 \times 09^{6} \times 2}.$
- $\frac{4036}{81729} = \frac{4 \times 03^{6}}{81 \times 729}.$
- $\frac{4139}{62085} = \frac{4^{(139)}}{6 \times 20 \times 8^{5}}.$
- $\frac{4316}{80925} = \frac{4^{3} \times 1 \times 6}{80 \times 9 \times 2 \times 5}.$
- $\frac{5168}{93024} = \frac{5 \times 1 \times 6 \times 8}{9 \times 30 \times 2^{4}}.$
- $\frac{5924}{10367} = \frac{5 \times 9 \times 2^{4}}{10 \times 3 \times 6 \times 7}.$
- $\frac{6034}{51289} = \frac{6^{03} \times 4}{51 \times 2 \times 8 \times 9}.$
- $\frac{6792}{81504} = \frac{6 \times 7 \times 9^{2}}{81 \times 504}.$

- $\frac{7028}{39156}=\frac{7^{02}\times 8}{39\times 1\times 56}.$
- $\frac{7056}{13824}=\frac{7\times 056}{1\times 3\times 8^2\times 4}.$
- $\frac{7123}{56984}=\frac{(7\times 1\times 2)^3}{56\times 98\times 4}.$
- $\frac{9018}{23547}=\frac{90\times 1\times 8}{2^3\times 5\times 47}.$
- $\frac{9627}{48135}=\frac{9\times 6^2\times 7}{4\times 81\times 35}.$
- $\frac{9814}{73605}=\frac{98\times 14}{7^3\times 6\times 05}.$
- $\frac{209}{481536}=\frac{2^{09}}{4^{8^{(15)}}\times 3\times 6}.$
- $\frac{543}{278016}=\frac{5\times 4^3}{2^7\times 80\times 16}.$
- $\frac{549}{237168}=\frac{54\times 9}{2\times 3^7\times 1\times 6\times 8}.$
- $\frac{814}{230769}=\frac{8^{(1^4)}}{2\times 3\times 07\times 6\times 9}.$
- $\frac{846}{370125}=\frac{84\times 6}{(3\times 70\times 1)^2\times 5}.$
- $\frac{895}{103462}=\frac{8\times 9\times 5}{1\times (034\times 6)^2}.$
- $\frac{10935}{27864}=\frac{1\times (09)^3\times 5}{27\times 86\times 4}.$
- $\frac{18734}{50692}=\frac{187\times 3^4}{506\times 9^2}.$
- $\frac{19845}{20736}=\frac{1\times 98\times 45}{2^{07}\times 36}.$
- $\frac{24716}{30895}=\frac{(2^{4\times 7}\times 1\times 6}{3\times (08)^9\times 5}.$
- $\frac{29385}{47016}=\frac{2^9\times 3\times 8\times 5}{4^{701}\times 6}.$
- $\frac{30186}{45279}=\frac{3\times 01\times 8^6}{4^5\times 2^7\times 9}.$
- $\frac{34187}{92506}=\frac{3^4\times 187}{9^2\times 506}.$
- $\frac{35481}{70962}=\frac{35\times 4\times 81}{70\times 9\times 6^2}.$
- $\frac{41975}{63802}=\frac{4\times 1^9\times 75}{6\times 38\times 02}.$
- $\frac{41975}{63802}=\frac{4\times 19\times 75}{6\times 38^{02}}.$
- $\frac{1083}{492765}=\frac{108\times 3}{4\times 9^2\times 7\times 65}.$
- $\frac{3024}{197568}=\frac{3\times (02)^4}{1^9\times 7\times 56\times 8}.$
- $\frac{3726}{105984}=\frac{3\times 72\times 6}{1^{05}\times 9\times 8^4}.$
- $\frac{4819}{602375}=\frac{4\times 8\times 1\times 9}{60\times 2^3\times 75}.$
- $\frac{6318}{470925}=\frac{6^3\times 1\times 8}{4\times 70\times 92\times 5}.$
- $\frac{9045}{827316}=\frac{90\times 4^5}{(8\times 2\times 7)^3\times 1\times 6}.$
- $\frac{9264}{105378}=\frac{9^2\times 64}{1053\times 7\times 8}.$
- $\frac{9804}{137256}=\frac{9\times 8\times 04}{1\times 3\times 7\times 2^5\times 6}.$

5 Dottable Fractions with Potentiation: Ending in Zero

The fractions given in section 4 are not ending in zero. Following similar line of section 3, below are fractions ending in zero in numerator and in denominator respectivamente.

5.1 Dottable Fractions with Potentiation: Numerator Ending in Zero

- $\frac{150}{432}=\frac{1\times 50}{(4\times 3)^2}.$
- $\frac{190}{342}=\frac{1\times 90}{3^4\times 2}.$
- $\frac{190}{3724}=\frac{1\times 90}{(3\times 7)^2\times 4}.$

- $\frac{340}{2176}=\frac{3\times 40}{2^{1\times 7}\times 6}$.
- $\frac{610}{3294}=\frac{6\times 10}{3^2\times 9\times 4}$.
- $\frac{950}{3724}=\frac{9\times 50}{(3\times 7)^2\times 4}$.
- $\frac{980}{1764}=\frac{9\times 80}{1^7\times 6^4}$.
- $\frac{1690}{4732}=\frac{1^6\times 90}{4\times 7\times 3^2}$.
- $\frac{1980}{6237}=\frac{1^9\times 80}{6\times 2\times 3\times 7}$.
- $\frac{3420}{5168}=\frac{3^4\times 20}{51\times 6\times 8}$.
- $\frac{4980}{6723}=\frac{4\times 980}{(6\times 7)^2\times 3}$.
- $\frac{640}{18792}=\frac{6\times 40}{1\times 87\times 9^2}$.
- $\frac{690}{13248}=\frac{6\times 90}{1\times (3\times 2)^4\times 8}$.
- $\frac{1350}{84672}=\frac{1\times 3\times 50}{8\times 4\times 6\times 7^2}$.
- $\frac{1580}{79632}=\frac{1^5\times 80}{7\times 96\times 3\times 2}$.
- $\frac{2430}{86751}=\frac{2^4\times 30}{8\times 6\times 7\times 51}$.
- $\frac{3280}{19475}=\frac{3^2\times 80}{1\times 9\times 475}$.
- $\frac{6890}{72345}=\frac{6\times 8\times 90}{7\times (2\times 3)^4\times 5}$.
- $\frac{7280}{39546}=\frac{7^2\times 80}{39\times 546}$.
- $\frac{8140}{76923}=\frac{8\times (1\times 40)}{7\times 6\times 9\times 2^3}$.
- $\frac{950}{172368}=\frac{9\times 50}{1\times 7\times 2\times 3^6\times 8}$.
- $\frac{15930}{84672}=\frac{1\times 59\times 30}{8\times 4\times 6\times 7^2}$.
- $\frac{18940}{23675}=\frac{1\times 8\times 9\times 40}{2^3\times 6\times 75}$.
- $\frac{5490}{237168}=\frac{54\times 90}{2\times 3^{7\times 1}\times 6\times 8}$.

5.2 Dottable Fractions with Potentiation: Denominator Ending in Zero

- $\frac{342}{950}=\frac{3^4\times 2}{9\times 50}$.
- $\frac{13}{6240}=\frac{1^3}{6\times 2\times 40}$.
- $\frac{18}{4320}=\frac{1^8}{4\times 3\times 20}$.
- $\frac{19}{3420}=\frac{1\times 9}{3^4\times 20}$.
- $\frac{24}{6750}=\frac{2^4}{6\times 750}$.
- $\frac{42}{1890}=\frac{4^2}{1\times 8\times 90}$.
- $\frac{95}{3420}=\frac{9\times 5}{3^4\times 20}$.
- $\frac{234}{9750}=\frac{2\times 3^4}{9\times 750}$.
- $\frac{256}{7840}=\frac{2^5\times 6}{7\times 840}$.
- $\frac{326}{4890}=\frac{3\times 2^6}{4\times 8\times 90}$.
- $\frac{428}{9630}=\frac{4^2\times 8}{96\times 30}$.
- $\frac{462}{3850}=\frac{4\times 6^2}{3\times 8\times 50}$.
- $\frac{784}{2560}=\frac{7\times 84}{2^5\times 60}$.
- $\frac{832}{9750}=\frac{(8\times 3)^2}{9\times 750}$.
- $\frac{963}{4280}=\frac{96\times 3}{4^2\times 80}$.
- $\frac{19}{37240}=\frac{1\times 9}{(3\times 7)^2\times 40}$.
- $\frac{23}{49680}=\frac{2^3}{4\times 9\times 6\times 80}$.
- $\frac{34}{21760}=\frac{3\times 4}{2^{1\times 7}\times 60}$.
- $\frac{42}{17850}=\frac{4^2}{17\times 8\times 50}$.
- $\frac{61}{32940}=\frac{6\times 1}{3^2\times 9\times 40}$.

- $\frac{95}{37240}=\frac{9\times 5}{(3\times 7)^2\times 40}.$
- $\frac{1456}{7280}=\frac{14\times 56}{7^2\times 80}.$
- $\frac{1475}{2360}=\frac{1\times 4\times 75}{2^3\times 60}.$
- $\frac{1635}{8720}=\frac{1\times 6^3\times 5}{8\times 720}.$
- $\frac{2934}{8150}=\frac{2\times 9\times 3^4}{81\times 50}.$
- $\frac{3264}{9180}=\frac{3^2\times 64}{9\times 180}.$
- $\frac{198}{62370}=\frac{1^9\times 8}{6\times 2\times 3\times 70}.$
- $\frac{236}{14750}=\frac{2^3\times 6}{1\times 4\times 750}.$
- $\frac{342}{51680}=\frac{3^4\times 2}{51\times 6\times 80}.$
- $\frac{432}{17850}=\frac{(4\times 3)^2}{1\times 7\times 850}.$
- $\frac{498}{67230}=\frac{4\times 98}{(6\times 7)^2\times 30}.$
- $\frac{728}{14560}=\frac{7^2\times 8}{14\times 560}.$
- $\frac{872}{16350}=\frac{8\times 72}{1\times 6^3\times 50}.$
- $\frac{918}{32640}=\frac{9\times 18}{3^2\times 640}.$
- $\frac{923}{46150}=\frac{9\times 2^3}{4\times 6\times 150}.$
- $\frac{18}{594720}=\frac{1^8}{59\times 4\times 7\times 20}.$
- $\frac{43}{267890}=\frac{4^3}{2^6\times 7\times 890}.$
- $\frac{69}{132480}=\frac{6\times 9}{1\times (3\times 2)^4\times 80}.$
- $\frac{1638}{24570}=\frac{16\times 38}{2^4\times 570}.$
- $\frac{1647}{82350}=\frac{16\times 4^7}{8^{2\times 3}\times 50}=\frac{1\times 64\times 7}{8^2\times 350}.$
- $\frac{1729}{86450}=\frac{1^7\times 2^9}{8\times 64\times 50}.$
- $\frac{1785}{23460}=\frac{1\times 7\times 8\times 5}{2^3\times 460}.$
- $\frac{1823}{54690}=\frac{18^2\times 3}{54\times 6\times 90}.$
- $\frac{1854}{23690}=\frac{1\times 8\times 54}{2^3\times 690}.$
- $\frac{1863}{72450}=\frac{1^8\times 6^3}{7\times 24\times 50}.$
- $\frac{1863}{72450}=\frac{1\times 8\times 6\times 3}{7\times 2^4\times 50}.$
- $\frac{1926}{37450}=\frac{1\times 9^2\times 6}{3\times 7\times 450}.$
- $\frac{2346}{17850}=\frac{2^3\times 46}{1\times 7\times 8\times 50}.$
- $\frac{2369}{18540}=\frac{2^3\times 69}{1\times 8\times 540}.$
- $\frac{2457}{16380}=\frac{2^4\times 57}{16\times 380}.$
- $\frac{2947}{63150}=\frac{2\times 9\times 4\times 7}{6^3\times 1\times 50}.$
- $\frac{2987}{46350}=\frac{2^9\times 87}{(4\times 6)^3\times 50}.$
- $\frac{3182}{95460}=\frac{3\times 18^2}{9\times 54\times 60}.$
- $\frac{3724}{51680}=\frac{(3\times 7)^2\times 4}{51\times 6\times 80}.$
- $\frac{3745}{19260}=\frac{3\times 7\times 45}{1\times 9^2\times 60}.$
- $\frac{3924}{81750}=\frac{(3\times 9)^2\times 4}{81\times 750}.$
- $\frac{4256}{83790}=\frac{4\times 2^5\times 6}{8\times 3\times 7\times 90}.$
- $\frac{4635}{29870}=\frac{(4\times 6)^3\times 5}{2^9\times 870}.$
- $\frac{5168}{37240}=\frac{51\times 6\times 8}{(3\times 7)^2\times 40}.$
- $\frac{5469}{18230}=\frac{54\times 6\times 9}{18^2\times 30}.$
- $\frac{5724}{38160}=\frac{57\times 2^4}{38\times 160}.$
- $\frac{6315}{29470}=\frac{6^3\times 1\times 5}{2\times 9\times 4\times 70}.$
- $\frac{6923}{54180}=\frac{69\times 2^3}{54\times 1\times 80}.$
- $\frac{7245}{18630}=\frac{7\times 2^4\times 5}{1\times 8\times 6\times 30}.$

- $\frac{8175}{39240}=\frac{81\times 75}{(3\times 9)^2\times 40}$.
- $\frac{216}{384750}=\frac{2^{1\times 6}}{3\times 8\times 4750}$.
- $\frac{3187}{254960}=\frac{3\times 1\times 8^7}{2^5\times 4^9\times 60}$.
- $\frac{8235}{16470}=\frac{8^2\times 35}{1\times 64\times 70}$.
- $\frac{243}{867510}=\frac{2^4\times 3}{8\times 6\times 7\times 510}$.
- $\frac{8372}{14950}=\frac{8\times (3\times 7)^2}{14\times 9\times 50}$.
- $\frac{328}{194750}=\frac{3^2\times 8}{1\times 9\times 4750}$.
- $\frac{7123}{569840}=\frac{(7\times 1\times 2)^3}{56\times 98\times 40}$.
- $\frac{8379}{42560}=\frac{8\times 3\times 7\times 9}{4\times 2^5\times 60}$.
- $\frac{689}{723450}=\frac{6\times 8\times 9}{7\times (2\times 3)^4\times 50}$.
- $\frac{9627}{481350}=\frac{9\times 6^2\times 7}{4\times 81\times 350}$.
- $\frac{148}{372960}=\frac{14^8}{3\times (7\times 2)^9\times 60}$.
- $\frac{728}{395460}=\frac{7^2\times 8}{39\times 5460}$.
- $\frac{158}{796320}=\frac{1^5\times 8}{7\times 96\times 3\times 20}$.
- $\frac{1894}{236750}=\frac{1\times 8\times 9\times 4}{2^3\times 6\times 750}$.
- $\frac{48135}{96270}=\frac{4\times 81\times 35}{9\times 6^2\times 70}$.

Only in few cases, we can write *dottable fractions with potentiation* with 7 digits in the denominator.

- $\frac{23}{7958460}=\frac{2^3}{79\times 584\times 60}$.
- $\frac{95}{1723680}=\frac{9\times 5}{1\times 7\times 2\times 3^6\times 80}$.
- $\frac{549}{2371680}=\frac{54\times 9}{2\times 3^7\times 1\times 6\times 80}$.

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