

03 - Fractions - Question Pack

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This question pack is part of a series of Numerical Reasoning Test (NRT) preparation resources which you can find at www.numericalreasoningtestsuccess.com.

These resources are organised into a number of different topics. For each topic, there is a set of notes and a question pack (such as this one).

Each set of notes explains a set of skills, with example questions for each one. Within the question pack for the same topic, you can find practice questions (with answers) for each of these skills.

I advise that you work through the sets of notes in order. Within each set of notes, start by reading the explanation of the first skill. Then go to that skill in the question pack and complete the practice questions. Only once you have mastered a skill should you move onto the next one. And only once you have mastered all the skills in a set of notes should you move on to the next set of notes. This approach is called *mastery learning*.

If you find any errors in this document (including mathematical errors, typos or any other mistakes), please let me know at contact@numericalreasoningtestsuccess.com.

Questions

You may use a calculator.

The answers can be found at the end of this document.

Enter a given fraction into a calculator.

- 1) Enter the fraction $\frac{13}{3}$ into your calculator.
- 2) Enter the fraction $\frac{4}{9}$ into your calculator.
- 3) Enter the fraction $\frac{67}{91}$ into your calculator.
- 4) Enter the fraction $\frac{7}{15}$ into your calculator.
- 5) Enter the fraction $\frac{6}{35}$ into your calculator.

Find the simplest form of a given fraction.

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- 1) What is the simplest form of the fraction $\frac{85}{68}$?
- 2) What is the simplest form of the fraction $\frac{56}{88}$?
- 3) Express the fraction $\frac{135}{225}$ in its simplest form.
- 4) Express the fraction $\frac{54}{243}$ in its simplest form.
- 5) What is the simplest form of the fraction $\frac{-84}{-36}$?

Add, subtract, multiply or divide two given fractions.

- 1) Divide $\frac{13}{29}$ by $\frac{6}{7}$.
- 2) What is $\frac{8}{13} - \frac{14}{5}$?
- 3) What is $\frac{16}{3}$ multiplied by $\frac{4}{5}$?
- 4) What is $\frac{522}{145}$ divided by $\frac{3}{5}$?
- 5) What is $\frac{1}{9} + \frac{1}{10}$?

Convert between fractions and decimals.

- 1) Convert 0.84375 to a fraction.
- 2) What is $\frac{6}{11}$ as a decimal?
- 3) Convert $\frac{3}{8}$ to a decimal.
- 4) What is 3.25 as a fraction?
- 5) What is $\frac{24}{5}$ as a decimal?

Convert between top heavy fractions and mixed numbers.

- 1) Convert $8\frac{7}{15}$ to a top heavy fraction.
- 2) What is $\frac{19}{3}$ as a mixed number?
- 3) Write $\frac{35}{4}$ as a mixed number.

- 4) What is $2\frac{1}{2}$ as a top heavy fraction?
- 5) Write $62\frac{3}{4}$ as a top heavy fraction.

Find a given fraction of a given amount.

- 1) What is $\frac{16}{35}$ of 140?
- 2) What is $\frac{8}{3}$ of 15?
- 3) What is $\frac{3}{4}$ of 45,612?
- 4) What is $\frac{5}{9}$ of -72?
- 5) What is $\frac{14}{25}$ of 350?

Calculate what fraction a given amount is of another given amount.

- 1) What is 150 as a fraction of 500?
- 2) What fraction of 77 is 56?
- 3) What is -138 as a fraction of -322?
- 4) What is 424,815 as a fraction of 254,889?
- 5) What fraction of 65 is 15?

Given an amount and what fraction it is of another amount, calculate the other amount.

- 1) 78.125 is $\frac{5}{8}$ of another number. What is that number?
- 2) 7810 is $\frac{2}{9}$ of another number. What is that number?
- 3) 52 is $\frac{4}{7}$ of another number. What is that number?
- 4) -32 is $\frac{4}{11}$ of another number. What is that number?
- 5) 6.4 is $\frac{32}{5}$ of another number. What is that number?

Increase or decrease a given amount by a given fraction of itself.

- 1) The number 924 is increased by $\frac{5}{6}$ of itself. What number does this give?
- 2) The number 26 is decreased by $\frac{1}{8}$ of itself. What number does this give?
- 3) The number 47,826 is increased by $\frac{3}{10}$ of itself. What number does this give?
- 4) The number 819 is decreased by $\frac{5}{9}$ of itself. What number does this give?
- 5) The number 25 is increased by $\frac{15}{4}$ of itself. What number does this give?

Given the fraction of itself that the initial amount was increased or decreased by, and the final amount, calculate the initial amount.

- 1) A number was decreased by $\frac{5}{13}$ of itself to give 96. What was the original number?
- 2) A number was increased by $\frac{7}{9}$ of itself to give 1136. What was the original number?
- 3) A number was decreased by $\frac{1}{8}$ of itself to give 693. What was the original number?
- 4) A number was increased by $\frac{2}{3}$ of itself to give 85. What was the original number?
- 5) A number was increased by $\frac{12}{7}$ of itself to give 16,074. What was the original number?

Answers

Enter a given fraction into a calculator.

1. $\frac{13}{3}$
2. $\frac{4}{9}$
3. $\frac{67}{91}$
4. $\frac{7}{15}$

5. $\frac{6}{35}$

Find the simplest form of a given fraction.

1. $\frac{5}{4}$

2. $\frac{7}{11}$

3. $\frac{3}{5}$

4. $\frac{2}{9}$

5. $\frac{7}{3}$

Add, subtract, multiply or divide two given fractions.

1. $\frac{91}{174}$

2. $\frac{-142}{65}$

3. $\frac{64}{15}$

4. 6

5. $\frac{19}{90}$

Convert between fractions and decimals.

1. $\frac{27}{32}$

2. 0.54545454...

3. 0.375

4. $\frac{13}{4}$

5. 4.8

Convert between top heavy fractions and mixed numbers.

1. $\frac{127}{15}$

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

3. $8\frac{3}{4}$

4. $\frac{5}{2}$

5. $\frac{251}{4}$

Find a given fraction of a given amount.

1. 64

2. 40

3. 34,209

4. -40

5. 196

Calculate what fraction a given amount is of another given amount.

1. $\frac{3}{10}$

2. $\frac{8}{11}$

3. $\frac{3}{7}$

4. $\frac{5}{3}$

5. $\frac{3}{13}$

Given an amount and what fraction it is of another amount, calculate the other amount.

1. 125

2. 35,145

3. 91

4. -88

5. 1

Increase or decrease a given amount by a given fraction of itself.

1. 1694
2. 22.75
3. 62,173.8
4. 364
5. 118.75

Given the fraction of itself that the initial amount was increased or decreased by, and the final amount, calculate the initial amount.

1. 156
2. 639
3. 792
4. 51
5. 5922