Contents

0.1 Division

0.1.1 Introduction

We have inverse functions for multiplication. This is division.

These will not necessarily have solutions for natural numbers or integers.

0.1.2 Division of natural numbers

$a.b = c \rightarrow b = \frac{c}{a}$

0.1.3 Division is not commutative

Division is not commutative:

$\frac{x}{y} \neq \frac{y}{x}$

0.1.4 Division is not associative

$\frac{\frac{x}{y}}{z} \neq \frac{\frac{x}{y}}{z}$

0.1.5 Division is not left distributive

Division is not left distributive over subtraction:

$\frac{a}{b-c} \neq \frac{a}{b} - \frac{a}{c}$

0.1.6 Division is right distributive

Division is right distributive over subtraction:

$\frac{a-b}{c} = \frac{a}{b} - \frac{b}{c}$

0.1.7 Division of integers