Ratio and Proportion: Missing Term and Dividing in a Ratio

Missing fourth term of a proportion a : b = c : x, and a quantity divided into parts in a three-way ratio.

Method: Proportion a/b = c/x; division in a ratio

Input parameters

Unit system: SI

Parameter	Value	Unit
a	4.0000	
b	10.000	
c	6.0000	
Quantity to divide	1,200.0	
Ratio part 1	1.0000	
Ratio part 2	2.0000	
Ratio part 3	3.0000	

Calculated results

Parameter	Value	Unit
Missing term x = b c / a	15.000	
Part 1	200.00	
Part 2	400.00	
Part 3	600.00	

Formula and method

$$x = \frac{bc}{a}, \quad T_i = T\frac{r_i}{\sum r}$$

Variables

a	a	-
b	b	-
c	c	-
T	Quantity to divide	-
r_1	Ratio part 1	-
r_2	Ratio part 2	-
r_3	Ratio part 3	-
x	Missing term x = b c / a	-
T_1	Part 1	-
T_2	Part 2	-
T_3	Part 3	-

Method and standards

Proportion.

Assumptions and limits

- Direct proportion.

References

- Proportion a/b = c/x; division in a ratio

Report details

Report reference	FCC-818X-MSGQ (the same inputs always give the same reference)
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Calculator	Ratio and Proportion: Missing Term and Dividing in a Ratio
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Release checks	2 reference cases of this calculator, computed independently, are checked on every release

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

This calculator online

https://calc.firecad.com/general/geometry/ratio-proportion

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.