

# quantities and motions

## Ramsay

"These [three combinations of the three primary ratios](#), when taken together with 1 as [unity](#), produce ten different **quantities and motions** - 1, 2, 3, 5, 6, 9, 15, 18, 27, and 45; and by producing the [octaves](#) of these [primes](#) and products, dividing by 4 for the [quantities](#), and multiplying by 2 for the [motions](#)<sup>2</sup> up to 64, we have 15 additional **quantities and motions** - 4, 8, 10, 12, 16, 20, 24, 30, 32, 36, 40, 48, 54, 60, and 64." [[Scientific Basis and Build of Music](#), page 16]

The simplest condition of **quantities and motions** is in a [string](#) where half the [length](#) is double the [vibrations](#). Next in the order of simplicity is a [[Scientific Basis and Build of Music](#), page 79]

See Also

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[amplitude](#)

[Distance](#)

[first comparison and combination of quantities](#)

[first condition in the first ratio](#)

[first condition in the third ratio](#)

[first condition of the second ratio](#)

[Frequency](#)

[Law of Relativity of Force](#)

[laws of quantities and motions](#)

[Motion](#)

[Number](#)

[order of quantities](#)

[Period](#)

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[quantities](#)

[Ratio](#)

[relative quantities](#)

[three primary ratios](#)

[Time](#)

[unit of quantities](#)

[Unit](#)