The sum of the lengths of the two sides of a triangle has to be greater than the length of the third side of this triangle.

A, B, C - sides of a triangle

A, B, C: integer

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| **Triangle** | | |
| **Scalene** | **Isosceles** | **Equilateral** |
| *is a triangle in which all sides are not equal* | *is a triangle in which the two sides are equal* | *is a triangle in which all sides are equal* |
| **Equivalence classes** | | |
| A≠B≠C (valid) | A=B≠C, A=C≠B, B=C≠A (valid) | A=B=C (valid) |
| A=0 or B=0 or C=0 (invalid) | A=0 or B=0 or C=0 (invalid) | A=0 or B=0 or C=0 (invalid) |
| A+B≤C, A+C≤B, C+B≤A (invalid) | A+B≤C, A+C≤B, C+B≤A (invalid) | A+B≤C, A+C≤B, C+B≤A (invalid) |
| A or B or C<0 (invalid) | A or B or C<0 (invalid) | A or B or C<0 (invalid) |
| non-integers (invalid) | non-integers (invalid) | non-integers (invalid) |
| others symbols: letters, punctuation marks, etc. (invalid) | others symbols: letters, punctuation marks, etc. (invalid) | others symbols: letters, punctuation marks, etc. (invalid) |
| A=B=C (invalid) | A≠B≠C (invalid) | A≠B≠C (invalid) |
| A=B≠C, A=C≠B, B=C≠A (invalid) | A=B=C (invalid) | A=B≠C, A=C≠B, B=C≠A (invalid) |

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| **VALID DATA** | | |
| **Triangle** | | |
| **Scalene** | **Isosceles** | **Equilateral** |
| A=4 B=6 C=8 | A=4 B=4 C=6 | A=10 B=10 C=10 |

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| **INVALID DATA** | | |
| **Triangle** | | |
| **Scalene** | **Isosceles** | **Equilateral** |
| A=0 B=0 C=0 | A=0 B=1 C=0 | A=0 B=10 C=20 |
| A=1 B=1 C=2 | A=1 B=2 C=3 | A=1 B=2 C=23 |
| A=-5 B=-6 C=-7 | A=-9 B=16 C=3 | A=3 B=-2 C=-6 |
| A=8.5 B=2 C=7 | A=5/7 B=5.6 C=4/5 | A=5 B=2 C=4/7 |
| A=YDR B=??? C=RTYF | A=5 B=6 C=FGFF | A=\*\*\*\* B=6 C=::: |
| A=10 B=10 C=10 | A=4 B=6 C=8 | A=4 B=6 C=8 |
| A=4 B=4 C=6 | A=10 B=10 C=10 | A=4 B=4 C=6 |