**Analysis of Algorithm**

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Here are some equalities that are useful in analyzing algorithms:

**Arithmetic series**

… (1)

More generally, if , where *c* is a constant, then

… (2)

**Geometric series**

… (3)

More generally, if , where *c* ≠ 1 is a constant, then

… (4)

If 0 < *c* < 1, then the sum of the infinite geometric series is

… (5)

**Harmonic series**

… (6)

**Sum of squares**

… (7)

**Logarithms**

… (8)

… (9)

… (10)