

Ahmadu Bello University
Department of Mathematics
COSC211: Alternative to Practical Test I: March 2015

Instructions

Attempt all questions. Time allowed: 60 mins.

1. Write a Java application that will compute and display the n th term and the sum of the first n terms of an AP (*arithmetical progression*). Its fields will be the *first term* and the *common difference*, both double, and the *number of terms* – an int.

[Hint: The n th term is given by $T_n = a + (n - 1)d$ and the sum of the first n terms is given by $S_n = \frac{n}{2}(2a + (n - 1)d)$]

2. Create a `CompoundInterest` class having fields `principal`, `rate` and `time` all being double. Compute and display the amount after 4 years given principal of ₦4,000.56 with a rate of 0.05

[Its value is given by $\text{Amount} = P(1 + r)^t$ where P is the principal amount invested, t is the time period in years and r is the annual rate of interest expressed as a fraction.]

Ahmadu Bello University
Department of Mathematics
COSC211: Alternative to Practical Test I: March 2015

Instructions

Attempt all questions. Time allowed: 60 mins.

1. Write a Java application that will compute and display the n th term and the sum of the first n terms of an AP (*arithmetical progression*). Its fields will be the *first term* and the *common difference*, both double, and the *number of terms* – an int.

[Hint: The n th term is given by $T_n = a + (n - 1)d$ and the sum of the first n terms is given by $S_n = \frac{n}{2}(2a + (n - 1)d)$]

2. Create a `CompoundInterest` class having fields `principal`, `rate` and `time` all being double. Compute and display the amount after 4 years given principal of ₦4,000.56 with a rate of 0.05

[Its value is given by $\text{Amount} = P(1 + r)^t$ where P is the principal amount invested, t is the time period in years and r is the annual rate of interest expressed as a fraction.]