

Financial Mathematics (Tutor Worksheet)

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Total Marks: 10
Number of Pages: 2

Instructions

- This sheet is compiled from past material with minor adjustments and mainly for your own practice.
- Your workings are very important and earn part marks in excel assessments.
- Label columns and make sure your work is understandable.
- Aim to learn more than you already know.
- **Note:** The mark allocations in this sheet are not a true reflection of the actual marking standard.

Good luck and do your best! Remember, the goal is to test your own understanding and identify areas that need revision.

Q1 A manufacturing company, MorsMors Ltd., has just invested in some new state-of-the-art machinery for R4 000 000.

A further R900 000 will be spent refurbishing the machinery in six months' time. An agreement has been made with a prospective client, Mamula Pty., who would like to occupy the machinery, beginning one year after the purchase date.

Mamula Pty. will pay installements to MorsMors Ltd. for five years and will then immediately purchase the machinery from the owner for R6 800 000. The initial installement will be R360 000 per annum and this will be increased by the same percentage compound rate at the beginning of each successive year. The installement income is received quarterly in advance.

Calculate the compound percentage increase in the annual installement required to earn the company an internal rate of return of 12% per annum effective.

[10]

“Remember, preparation is the key to success! Take your time, read each question carefully, and trust in your knowledge. Good luck!”