



MATHS

BOOKS - VIDHYASANGAM - RAO'S ACADEMY MATHS (KANNADA ENGLISH)

APPENDIX 2 INTRODUCTION TO MATHEMATICAL MODELLING

Exercise A 2 1

1. Suppose a company needs a computer for some period of time. The company can either hire a computer for Rs. 2,000 per month or buy one for Rs 25,000. If the company has to use the computer for a long period, the company will pay such a high rent, that buying a computer has to use the computer will be cheaper. Find the number of months beyond which it will be cheaper to buy a computer.



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2. Suppose a car starts from a place A and travels at a speed of 40 km/h towards another place B. At the same instance, another car starts from B and travels towards A at a speed of 30 km/h. If the distance between A and B is 100 km, after how much time will the cars meet?



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3. The moon is about 3,84,000 km from the earth, and its path around the earth is nearly

circular. Find the speed at which it orbits the earth, assuming that it orbits the earth in 24 hours. (Use $\pi = 3.14$).



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4. The family pays Rs 1000 for electricity on an average in those months in which it does not use a water heater. In the months in which it uses a water heater, the average electricity bill is Rs 1240. The cost of using the water heater

is Rs 8.00 per hour. Find the average number of hours the water heater is used in a day.



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