ATOMIC ENERGY EDUCATION SOCIETY, MUMBAI

CLASS -8 SUBJECT:- MATHEMATICS

CHAPTER 8 :- COMPAIRING QUANTITIES

MODULE 3/3 (HANDOUT)

DEDUCING A FORMULA FOR COMPOUND INTEREST

Suppose P_1 is the sum on which interest is compounded annually at a rste of R % per annum.

Simple interest after 1 year

SI=$\frac{\{p_1 \times R \times 1\}}{100} = \frac{P_1 R}{100}$

Amount 1 year

A = P_1+ SI=P_1+$\frac{P_1 R}{100}$=$P_1(1 + \frac{R}{100})$

SI after next year

SI=$\frac{\left\{P_1(1+\frac{R}{100}) \times R \times 1\right\}}{100}$

Amount 2 year

A = $P_1(1 + \frac{R}{100})$+ SI=$P_1(1 + \frac{R}{100})$+$\frac{\left\{P_1(1+\frac{R}{100}) \times R \times 1\right\}}{100}$

= $P_1\left(1 + \frac{R}{100}\right)^2$

Similarly for n year A= $P_1\left(1 + \frac{R}{100}\right)^n$