≈ { } √ ∞ Σ π

APR

Math 1030 # 8a

compound interest

effective yield

The Power of Compounding

principal

Simple vs. Compound Interest

balance

Simple Interest is paid only on the principal amount.

Compound Interest is paid on the principal and the interest added to to the principal.

EX 1: Calculating Compound Interest on $1000 at 10% interest compounded annually.

After n years	Interest	Balance

<u>Compound Interest Formula</u> (when compounding only once per year)

$$A = P(1+APR)^{Y}$$

A	= Account balance after Y years
P	= Principal amount invested
APR	= annual percentage rate (as a decimal)
Y	= number of years

EX 1: Find the balance if you invest \$3000 at an APR of 4% for 12 years.

Compound Interest Formula (when compounding more than once a year)

$$A = P(1+\frac{APR}{n})^{(nY)}$$

A = Amount after Y years
P = Principal amount
APR = Annual interest rate as a decimal
n = number of times compounded each year
Y = number of years of compounding

EX 2: Find the balance if you invest $3000 for 12 years at 4%, in an account which compounds daily.