Compound Interest

Compound Interest - Interest that is added to the principal *before* new interest earned is calculated. So interest is calculated on the principal *and* on interest already earned. Interest is paid at regular time intervals called the **compounding period**.

Compounding Period - The intervals at which interest is calculated; for example,

annually	1 time per year
semi-annually	2 times per year
quarterly	4 times per year
monthly	12 times per year

Example: What would be the total value of a $10,000 initial investment that earned 3.25% **compound** interest for 5 years?

Example: What would be the total value of a $P initial investment that earned i% **compound** interest for n years?

Example: You decide to invest $5,000 for 3.5 years at 2.5% interest compounded monthly. What is the total final value of your investment?

Example: You decide to invest $15,000 for at 4% interest compounded monthly. After 5 years, the interest rate changes to 3.25% compounded quarterly.
You leave the investment for another 3 years.
What is the total value of your investment after the full 8 years?