1. CIRCLE: $(x-h)^2 + (y-k)^2 = r^2$

2. PARABOLA:
$$y-k=a(x-h)^2$$

 $y=f(x)=ax^2+bx+c$ $(a \ne 0)$ vertex at: $\left(-\frac{b}{2a}, c-\frac{b^2}{4a}\right)$

For the following formulas, r is the annual interest rate, n is the number of years, k is the frequency of compounding, and i is the periodic rate $\left(i = \frac{r}{k}\right)$.

3. COMPOUND INTEREST FORMULA

A principal P, earning compound interest will grow to a future value FV according to the formula

$$FV = P(1+i)^{kn}$$

4. EFFECTIVE RATE OF INTEREST

The effective rate of interest R for an account is given by the formula $R = (1+i)^k - 1$

5. PRESENT VALUE

The present value PV that must be deposited now to provide a future value FV is given by the formula

$$PV = FV(1+i)^{-kn}$$

6. FUTURE VALUE OF AN ANNUITY

The future value FV of an ordinary annuity with deposits of P dollars is given by the formula

$$FV = \frac{P[(1+i)^{kn} - 1]}{i}$$

7. SINKING FUND PAYMENT

For an annuity to provide a future value FV, the regular payment P is given by the formula

$$P = \frac{FVi}{(1+i)^{kn} - 1}$$

8. PRESENT VALUE OF AN ANNUITY

The present value PV of an annuity with payments of P dollars is given by the formula

$$PV = \frac{P[1 - (1+i)^{-kn}]}{i}$$

9. INSTALLMENT PAYMENTS

The periodic payment P required to repay an amount A is given by

$$P = \frac{Ai}{1 - (1+i)^{-kn}}$$