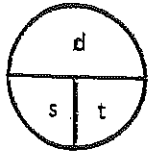


How to use a "circle formula":

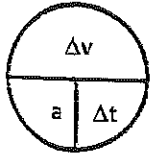
- Use your finger to cover up the variable you want to SOLVE for.
- If the remaining two variables are next to each other, you will MULTIPLY those numbers together.
- If the remaining two variables are above and below each other, you will DIVIDE the top number by the bottom number.

Speed or Velocity



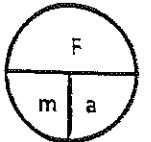
$s = d \div t$        $s =$  average speed  
 $d = s \times t$       = distance  
 $t = d \div s$       = time

Acceleration



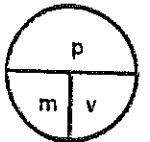
$a =$  average acceleration  
 $\Delta v =$  final velocity - initial velocity  
 $\Delta t =$  final time - initial time

Force or Acceleration



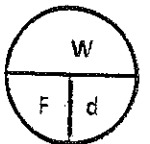
$F =$  force  
 $m =$  mass  
 $a =$  acceleration

Momentum or Collisions



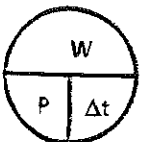
$p =$  momentum  
 $m =$  mass  
 $v =$  velocity

Work Energy



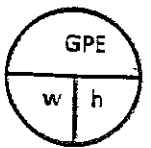
$W =$  work  
 $F =$  force  
 $d =$  distance

Mechanical Power



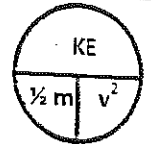
$W =$  work  
 $P =$  power  
 $\Delta t =$  final time - initial time.

Gravitational Potential Energy



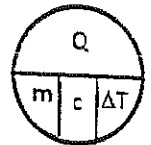
$GPE =$  gravitational Potential Energy  
 $w =$  weight\*  
 $h =$  height  
 \* If mass is given, convert it to weight first, then use the GPE formula

Kinetic Energy



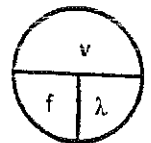
$KE =$  Kinetic Energy  
 $m =$  mass  
 $v^2 = v \cdot v =$  velocity  $\times$  velocity

Heat



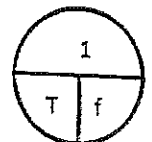
$Q =$  heat  
 $m =$  mass  
 $c =$  specific heat capacity  
 $\Delta T =$  final Temp - initial Temp

Waves



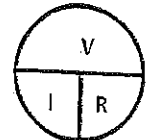
$v =$  speed  
 $f =$  frequency  
 $\lambda =$  wavelength

Period and Frequency



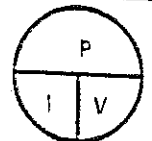
$T =$  time  
 $f =$  frequency

Ohm's Law



$V =$  Voltage  
 $I =$  current  
 $R =$  resistance

Electrical Power



$P =$  power  
 $I =$  current  
 $V =$  Voltage or potential difference