***Background:*** When a formula is solved for a variable, that variable has a *coefficient* of 1 and an exponent of 1. That variable is said to be written in terms of the other variables.

For example, converts Celsius temperatures to Kelvin measurements. This is solved for K (the coefficient is 1 and the exponent is 1). To write in terms of C, we must “undo” the operations to isolate C (just like solving for a variable).

and are **equivalent formulas** because every pair of values of K and C that works in the first formula also work in the second formula. *An important use of equivalent formulas arises when we need to input equations or formulas into a graphing calculator.*

***Directions:*** Given each formula below, solve for the indicated variable.

1. (Interest = Principal × rate × time – this is the simple interest formula)
   1. Solve for P:
   2. Solve for r :
   3. Solve for t :
2. (watts = volts × amps)
   1. Solve for V:
   2. Solve for A:
3. (Circumference of a circle)
   1. Solve for r:
   2. Solve for π:
4. A(Area of a triangle)
   1. Solve for b:
   2. Solve for h:
5. (Area of a trapezoid)
   1. Solve for h:
   2. Solve for b1:
   3. Solve for b2:
6. (Distance = rate × time)
   1. Solve for r:
   2. Solve for t:
7. (General form of a linear equation).
   1. Solve for y:
   2. Solve for x:
8. (Slope-intercept form of a line).
   1. Solve for *x*:
   2. Solve for *m*:
   3. Solve for *b*:
9. 9. (Point-slope form of a line).
   1. Solve for *y*:
   2. Solve for *m*:
10. (Celsius temperature related to Fahrenheit temperature).
    1. Solve for F:
11. (Voltage = Current × Resistance)
    1. Solve for *I:*
    2. Solve for *R*: