In this worksheet, you will rearrange formulas involving several variables.

1. The formula $PV = nRT$ is used in general chemistry.
   (a) Solve for $T$.

   (b) Solve for $V$.

2. The circumference of a circle in terms of its radius is given by the formula $C = 2\pi r$. Solve for $r$.

3. The area of a triangle, in terms of its base and height, is $A = \frac{1}{2}bh$. Solve for $h$. 
4. The area of a circle in terms of its radius is given by the formula $A = \pi r^2$. Solve for $r$.

5. The formula $S = 4\pi r^2$ gives the surface area of a sphere in terms of the radius. Solve for $r$ in terms of $S$.

6. The formula $V = \frac{4}{3}\pi r^3$ gives the volume of a sphere in terms of the radius. Solve for $r$ in terms of $V$. (Hint: You can take a cube root – it’s just like taking a square root. The notation for the ‘cube root of a’ is $\sqrt[3]{a}$.)
7. A line passes through the point \((0, 4)\) and has slope \(m = -3\) Find an equation for the line.

8. A line passes through the point \((2, -1)\) and has slope \(m = 2\). Find an equation for the line.

9. A line passes through the points \((2, 4)\) and \((5, -2)\). Find an equation for the line.

10. A line passes through the points \((1, -3)\) and \((3, -2)\). Find an equation for the line.