**3.5 Related Rates**

**Related Rates Problems:**

**Steps: D**

**R**

**E**

**D**

**S**

A spherical snowball is melting in such a way that its volume is decreasing at a rate of 1 cm3/min. At what rate is the radius decreasing when the radius is 5 cm?

A man starts walking north at a speed of 1.5 m/s and a woman starts at the same point *P* at the same time walking west at a speed of 2 m/s. At what rate is the distance between the man and the woman increasing one minute later?

A water tank is built in the shape of a circular cone with height 5 m and diameter 6 m at the top. Water is being pumped into the tank at a rate of 1.6 m3/min. Find the rate at which the water level is rising when the water is 2 m deep.