**5.3 Concavity and Points of Inflection**

Concave upward –

Concave downward –

Point of Inflection –

What does it mean for the first derivative to be positive, ?

What does it mean for the second derivative to be positive, ?

**Test for Concavity**

If  for all *x* in *I*, then

If  for all *x* in *I*, then

Consider . Find intervals of increase and decrease. Find local Max and Min values. Find intervals of concavity. Find points of inflection. Sketch the curve.

Determine where the curve  is concave upward and concave downward. Find the points of inflection.