1. A curve *C* is defined by the parametric equations.

(a) Find  in terms of *t*.

(b) Find an equation of the tangent line to *C* at the point where *t* = 2.

2. A curve *C* is defined by the parametric equations.

(a) Find  in terms of *t*.

(b) Find an equation of the tangent line to *C* at the point where *t* =.

3. Determine the area of the region below the parametric curve by the following set of parametric equations:

4. Determine the area of the region below the parametric curve by the following set of parametric equations:

5. Find the arc length of the curve .

6. Find the arc length of the curve .