





1. Determine the length of the parametric curve given by the following parametric equations.

$$x=3\sin(t)$$

$$y=3\cos(t)$$

$$0\leq t\leq 2π$$

1. Use the arc length formula for the following parametric equations.

$$x=3\sin(t)$$

$$y=3\cos(t)$$

$$0\leq t\leq 2π$$

Solutions:

33. $x=17.9t\cos(\left(14.3\right)), y=1.71+17.9t\sin(\left(14.3\right))-4.9t^{2}$

34. $1.19 $sec

35. $20.6$ ft

36. $x=32t\cos(\left(48\right)), y=32t\sin(\left(48\right))-16t^{2}$

37. $1.49$ sec

38. $31.9$ ft

39. $x=vt\cos(\left(43\right)), y=6+vt\sin(\left(43\right))-16t^{2}$

40. $39.64$ ft/sec

 1. $6π$

 2. $18π$