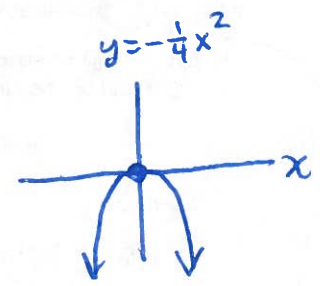


Section 2.6

#331 $x^2 + z^2 + 4y = 0, z = 0$

\Downarrow
 $x^2 + 0^2 + 4y = 0$
 \Downarrow
 $y = -\frac{1}{4}x^2$

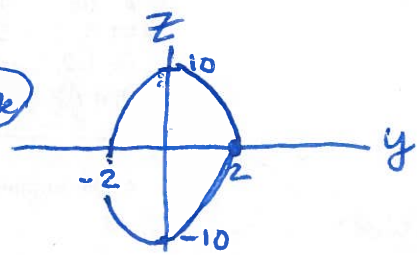


#333 $-4x^2 + 25y^2 + z^2 = 100, x = 0$

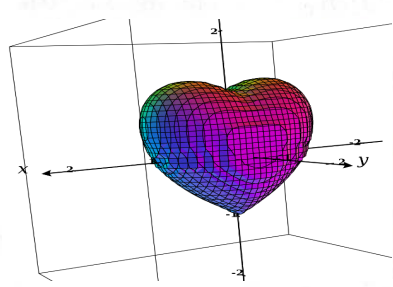
\Downarrow
 $-4(0)^2 + 25y^2 + z^2 = 100$
 $= 10^2$

\Downarrow
 $\frac{y^2}{4} + \frac{z^2}{100} = 1$

\Downarrow
 $\frac{y^2}{2^2} + \frac{z^2}{10^2} = 1$ (ellipse)

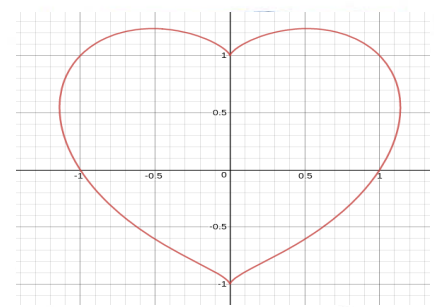


#361 a)



b) xz-plane is $y = 0$

$\Rightarrow (x^2 + z^2 - 1)^3 - x^2 z^3 + \frac{9}{10} = 0$

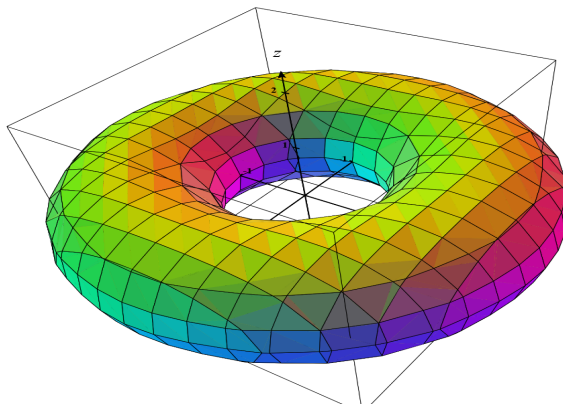


#362) $(x^2 + y^2 + z^2 + R^2 - r^2)^2 = 4R^2(x^2 + y^2)$

(2)

a) if $R=2, r=1$: $R^2 - r^2 = 4 - 1 = 3$, $4R^2 = 4(4) = 16$

$$(x^2 + y^2 + z^2 + 3)^2 = 16(x^2 + y^2)$$



b) xy -plane trace \rightarrow set $z=0$ to get

$$(x^2 + y^2 + 3)^2 = 16(x^2 + y^2)$$

