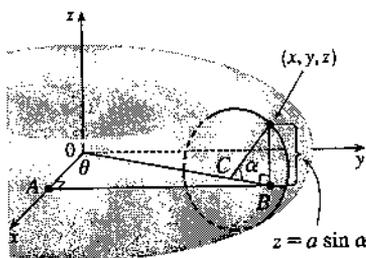**32. (a)**

Here $z = a \sin \alpha$, $y = |AB|$, and $x = |OA|$. But $|OB| = |OC| + |CB| = b + a \cos \alpha$ and $\sin \theta = \dfrac{|AB|}{|OB|}$ so

that $y = |OB| \sin \theta = (b + a \cos \alpha) \sin \theta$. Similarly $\cos \theta = \dfrac{|OA|}{|OB|}$ so $x = (b + a \cos \alpha) \cos \theta$. Hence a

parametric representation for the torus is $x = b \cos \theta + a \cos \alpha \cos \theta$, $y = b \sin \theta + a \cos \alpha \sin \theta$, $z = a \sin \alpha$,

where $0 \le \alpha \le 2\pi$, $0 \le \theta \le 2\pi$.