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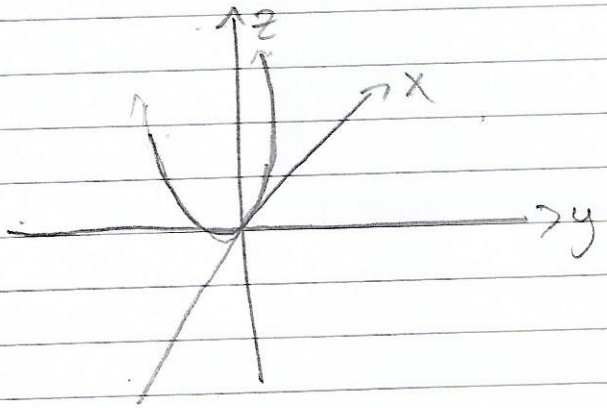
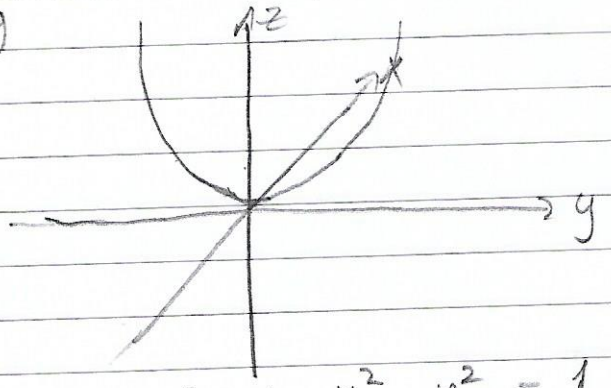
1)a) i. $z = \frac{x^2}{4} + \frac{y^2}{9}$, $z=0 \Rightarrow \frac{x^2}{4} + \frac{y^2}{9} = 0$

$\frac{x^2}{4}$ = positivo, $\frac{y^2}{9}$ = positivo, ou seja, não existe uma interseção com o plano xy.

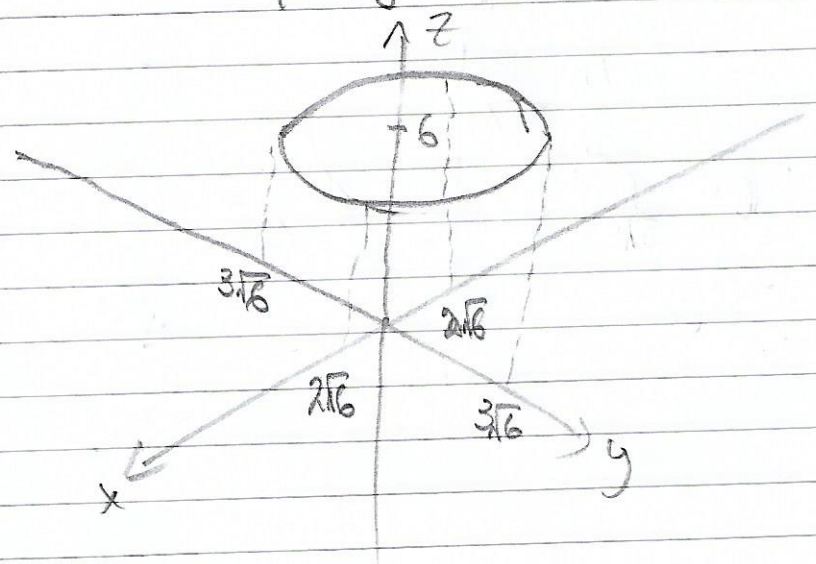
ii. $y=0 \Rightarrow z = \frac{x^2}{4}$



iii. $x=0 \Rightarrow z = \frac{y^2}{9}$



iv. $z=6 \Rightarrow \frac{x^2}{4} + \frac{y^2}{9} = 6 \Rightarrow \frac{x^2}{24} + \frac{y^2}{54} = 1$



$3\sqrt{6}$

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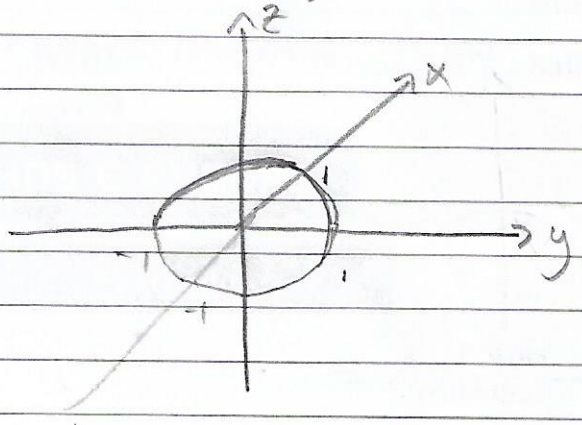
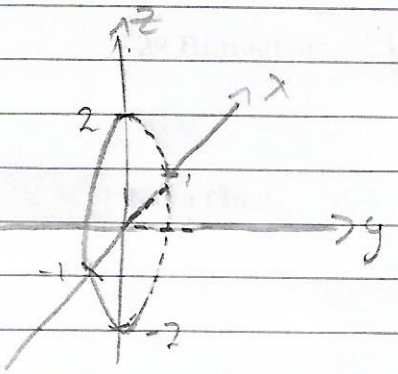
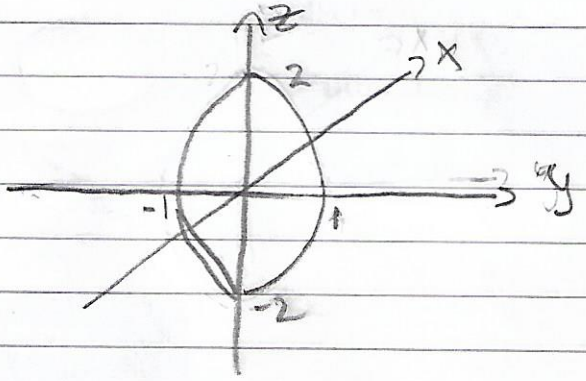
1)b) i. $z=0 \Rightarrow x^2+y^2=1$



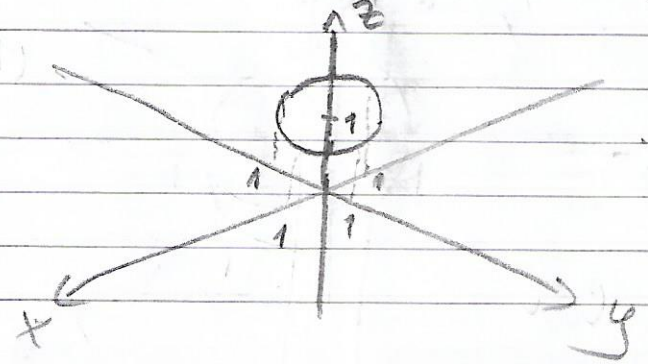
ii. $y=0 \Rightarrow x^2+\frac{z^2}{4}=1$



iii. $x=0 \Rightarrow y^2+\frac{z^2}{4}=0$



iv. $z=1 \Rightarrow x^2+y^2+\frac{1}{4}=1 \Rightarrow x^2+y^2=\frac{3}{4}$



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