$$\psi_{122} = A \sin\left(\frac{\pi x}{L}\right) \sin\left(\frac{\pi y}{L}\right) \sin\left(\frac{2\pi z}{3L}\right)$$

7-9) a) $n=3 \to l=0,1,2$

b) $l=0 \quad m=0$
$l=1 \quad m=-1,0,1$
$l=2 \quad m=-2,-1,0,1,2$

c) $(1+3+5) \times 2 = \underline{\underline{18}}$