

# Isotope Homework Answers

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1) Chlorine-35  $m=34.97u$ , 75.78%  
Chlorine-37  $m=36.97u$ , @ 24.22  
 $= (34.97 \times 0.7578) + (36.97 \times 0.2422)$   
 $= \underline{35.45u}$

2) Boron-10  $m=10.01$ , 19.8%  
Boron-11  $m=11.01u$ , 80.2%  
 $= (10.01 \times 0.198) + (11.01 \times 0.802)$   
 $= 10.8u$

3) Lithium-6  $m=6.02$ , 7.59%  
Lithium-7  $m=7.02$ , 92.41%

$$(6.02 \times 0.0759) + (7.02 \times 0.9241)$$
$$= 6.94u$$

~~$(6.02 \times 0.0759) + (7.02 \times 0.9241)$~~

4) Mg-24  $m=23.99$  @ 78.99%  
Mg-25  $m=24.99$  @ 10.00%  
Mg-26  $m=25.98$  @ 11.01%  
 $= (23.99 \times 0.7899) + (24.99 \times 0.1) + (25.98 \times 0.1101)$   
 $= 24.31u$

e) Rb-85  $m=84.910$  @ 72.17%

Rb-87  $m=86.910$  @ 27.83%

$$(84.91 \times 0.7217) + (86.91 \times 0.2783) \\ = 85.470$$