

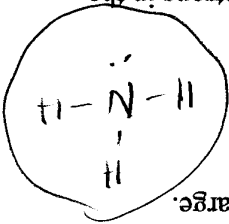
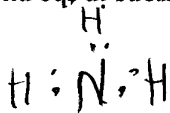
Isotope	Symbol	Mass #, A	Atomic #, Z	# p <sup>+</sup>	# e <sup>-</sup>	# n <sup>0</sup>
Fe-86	<sup>26</sup> Fe <sub>80</sub>	86	26	26	26	54
Sr-90	<sup>38</sup> Sr <sub>90</sub>	90	38	38	38	52
B-81	<sup>5</sup> B <sub>81</sub>	81	35	35	35	46

Calculate the number of protons, electrons and neutrons of an Se-80 atom that has a -2 charge.

p <sup>+</sup>	34
n <sup>0</sup>	46
e <sup>-</sup>	36

80 - 34

How many subatomic particles does this ion have?



Draw the atomic diagrams showing all of the protons and neutrons in the nucleus and electrons in the correct shells for the following:

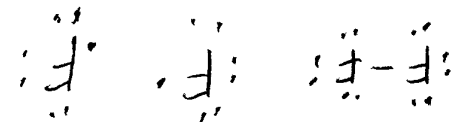
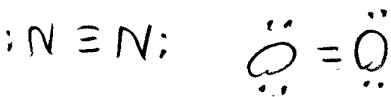
<p>Br<sub>81</sub></p>	<p>Kr<sub>82</sub></p>	<p>Mn<sub>56</sub></p>
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How many valence electrons in the following?

Draw the electron dot structures for the following

H	1
O <sup>2-</sup>	8
Xe	8
I <sup>-</sup>	8

silicon	Rb	Si
O <sub>2</sub>	Rb <sup>+</sup>	
F <sub>2</sub>	Kr	
Ammonia	NH <sub>3</sub>	



1. How many grams of alcohol absorb 928 calories to change the temperature 15°C? Specific heat of alcohol is .58 cal/g°C

$MC\Delta T = Q$

$928 = .58 \times M \times 15$

$M = 928 / (.58 \times 15) = 107.5$

2. What is the temperature change of 224 ml of water that absorbs 800 calories?

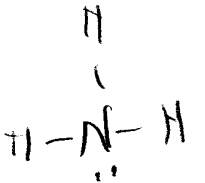
$M = \frac{C\Delta T}{Q}$

$928 \text{ cal} = (1.58) \times (15) \times M$

$3.57^\circ\text{C} = \frac{800 \text{ cal}}{(224 \text{ g})(1 \frac{\text{cal}}{\text{g}^\circ\text{C}})}$

3. How many calories does it take to vaporize 1,234 grams of water at 100°C?

$1234 \text{ g} \times 540 \frac{\text{cal}}{\text{g}} = 666360 \text{ cal}$



Answer \_\_\_\_\_

Answer \_\_\_\_\_

Answer \_\_\_\_\_