



# Protons, Neutrons, and Electrons



1. Complete the following chart by filling in the blanks:

	Proton (p)	Neutron (n)	Electron (e)
Relative Charge			
Relative Mass			
Location			
Significance			
Formula for Number			

2. Provide the symbol and charge (where appropriate) for each of the following elements.

Indicate if the atom is neutral (N), an anion (A), of a cation (C). See example.

# of protons, # of electrons	Symbol	N, A, or C?
19 p, 18 e <sup>-</sup>	K <sup>+</sup>	C
33 p, 36 e <sup>-</sup>		A
30 p, 30 e <sup>-</sup>		N
26 p, 23 e <sup>-</sup>		C
35 p, 36 e <sup>-</sup>		A
	Ca <sup>+2</sup>	C
	N <sup>-3</sup>	A
	Al	N



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## 1. Answers

	Proton (p)	Neutron (n)	Electron (e)
Relative Charge	+1	0	-1
Relative Mass	1.007 amu	1.000 amu	0.00055 amu
Location	Inside the nucleus	Inside the nucleus	Outside the nucleus
Significance	Identity, charge, mass	Mass	Charge
Formula for Number	# of p = mass # - # of n	# of n = mass # - # of p	# of e = # of p

## 2.

# of protons, # of electrons	Symbol	N, A, or C?
19 p, 18 e <sup>-</sup>	K <sup>+</sup>	C
33 p, 36 e <sup>-</sup>	As <sup>-3</sup>	A
30 p, 30 e <sup>-</sup>	Zn	N
26 p, 23 e <sup>-</sup>	Fe <sup>+3</sup>	C
35 p, 36 e <sup>-</sup>	Br <sup>-</sup>	A
20 p, 18 e <sup>-</sup>	Ca <sup>+2</sup>	C
7 p, 10 e <sup>-</sup>	N <sup>-3</sup>	A
13 p, 13 e <sup>-</sup>	Al	N