Atomic Structure Puzzle

Atomic number for Cl _____ Set 1	Mass number for $^{16}_{8}O$ _____ Set 1	Number of neutrons in $^{46}_{20}Ca$ _____ Set 1	Number of electrons in a neutral cerium atom _____ Set 1
Number of protons in a Ba^{2+} ion _____ Set 1	Atomic number of a +1 ion having 18 electrons _____ Set 1	Mass number of an atom with 1 proton, 1 neutron, and 1 electron _____ Set 1	Number of protons in an element with atomic number 12 _____ Set 1
Atomic number of a +3 ion with 30 neutrons and 27 electrons _____ Set 1	Number of neutrons in ^{75}As _____ Set 1	Mass number of a neutral atom with 30 neutrons and 25 electrons _____ Set 1	Number of electrons in a O^{2-} ion _____ Set 1
Number of electrons in a neutral nickel atom _____ Set 1	Number of protons in a neutral atom with 82 neutrons and 57 electrons _____ Set 1	Number of protons in Co^{3+} _____ Set 1	Atomic number of $^{36}_{18}Ar$ _____ Set 1
Number of protons in Cu^{+} _____ Set 1	Mass number of an ion with 28 protons, 32 neutrons, and 26 electrons _____ Set 1	Number of neutrons in $^{64}Zn^{2+}$ _____ Set 1	Number of electrons in a neutral atom with atomic number 52 _____ Set 1

BAP7353A

Atomic Structure Puzzle

n	i	o	t
n	D	h	m
o	o	a	o
t	n	e	k
m	r	t	f

BAP7353A

Atomic Structure Puzzle

Atomic number of potassium _____ Set 2	Number of protons in $^{23}Na^{+}$ _____ Set 2	Mass number of an atom with 4 protons, 4 electrons and 5 neutrons _____ Set 2	Number of neutrons in $^{15}_{7}N$ _____ Set 2
Number of electrons in F^{-} _____ Set 2	Number of electrons in a neutral magnesium atom _____ Set 2	Number of electrons in P^{3-} _____ Set 2	Mass number of an ion with 8 protons, 10 electrons, and 9 neutrons _____ Set 2
Number of protons in a neutral atom with 30 neutrons and 25 electrons _____ Set 2	Number of neutrons in ^{37}Cl _____ Set 2	Number of protons in an element with atomic number 13 _____ Set 2	Number of electrons in a neutral iron atom _____ Set 2
Number of neutrons in a $^{41}K^{+}$ ion _____ Set 2	Atomic number of a –2 ion having 18 electrons _____ Set 2	Number of protons in a Sc^{3+} ion _____ Set 2	Atomic number of $^{59}_{27}Co$ _____ Set 2
Mass number of $^{14}_{7}N$ _____ Set 2	Mass number of a +1 ion with 12 neutrons, and 10 electrons _____ Set 2	Mass number of a neutral atom with 12 neutrons and 12 electrons _____ Set 2	Number of electrons in a neutral atom with atomic number 15 _____ Set 2

BAP7353A

Atomic Structure Puzzle

t	h	t	t
o	w	y	a
a	o	h	l
t	e	n	r
k	a	e	u

BAP7353A

Atomic Structure Puzzle

Number of protons in a K^+ ion _____ Set 3	Number of electrons in a neutral atom with atomic number 21 _____ Set 3	Number of electrons in a neutral carbon atom _____ Set 3	Number of protons in an element with atomic number 25 _____ Set 3
Number of protons in a silicon atom _____ Set 3	Number of electrons in a Mg^{2+} ion _____ Set 3	Number of neutrons in a $^{17}O^{2-}$ ion _____ Set 3	Atomic number of a –2 ion with 18 electrons _____ Set 3
Mass number of a neutral atom with 12 neutrons and 10 electrons _____ Set 3	Number of electrons in a neutral vanadium atom _____ Set 3	Number of neutrons in ^{33}S _____ Set 3	Number of protons in a neutral atom with 24 neutrons and 20 electrons _____ Set 3
Mass number of a +2 ion with 14 neutrons and 10 electrons _____ Set 3	Atomic number of zinc _____ Set 3	Mass number of $^{56}_{26}Fe$ _____ Set 3	Number of neutrons in $^{29}_{14}Si$ _____ Set 3
Mass number of an atom with 6 protons, 7 neutrons, and 6 electrons _____ Set 3	Atomic number of $^{53}_{24}Cr$ _____ Set 3	Number of electrons for $^{37}Cl^-$ _____ Set 3	Mass number of an ion with 6 protons, 6 electrons, and 6 neutrons _____ Set 3

BAP7353A

Atomic Structure Puzzle

d o s m

a m . h

i t n a

e , a e

o i T

Atomic Structure Puzzle

Atomic number of silver _____ Set 4	Number of neutrons in ^{91}Zr _____ Set 4	Number of protons in Cl^- _____ Set 4	Mass number of a neutral atom with 36 neutrons and 30 electrons _____ Set 4
Number of electrons in a neutral terbium atom _____ Set 4	Number of neutrons in $^{88}_{38}Sr$ _____ Set 4	Mass number of an ion with 27 protons, 25 electrons, and 32 neutrons _____ Set 4	Mass number of $^{60}_{28}Ni$ _____ Set 4
Mass number of an atom with 24 protons, 30 neutrons and 24 electrons _____ Set 4	Number of protons in a neutral atom with 80 neutrons and 56 electrons _____ Set 4	Number of electrons in a neutral indium atom _____ Set 4	Number of protons in a Rh^{3+} ion _____ Set 4
Number of electrons in a Ag^+ ion _____ Set 4	Atomic number of $^{165}_{67}Ho$ _____ Set 4	Number of electrons in a +2 ion of tin _____ Set 4	Number of electrons in a neutral atom with atomic number 58 _____ Set 4
Mass number of a +4 ion with 72 neutrons and 48 electrons _____ Set 4	Mass number of an atom with 32 protons and 42 neutrons _____ Set 4	Atomic number of a –1 ion having 54 electrons _____ Set 4	Number of protons in a tellurium atom _____ Set 4

BAP7353A

Atomic Structure Puzzle

s a , e

h t y e

t r p y

o o i h

a h s ,

BAP7353A

Atomic Structure Puzzle

Number of electrons in Ba^{2+} _____ Set 5	Number of neutrons in $^{143}_{60}Nd$ _____ Set 5	Mass number of an ion with 30 protons, 28 electrons, and 38 neutrons _____ Set 5	Number of protons in a neutral atom with 111 neutrons and 76 electrons _____ Set 5
Mass number of a –1 ion with 44 neutrons and 36 electrons _____ Set 5	Mass number of an atom with 37 protons, 37 electrons, and 49 neutrons _____ Set 5	Number of electrons in a neutral europium atom _____ Set 5	Mass number of $^{70}_{32}Ge$ _____ Set 5
Number of neutrons in ^{125}Te _____ Set 5	Number of neutrons in $^{133}_{55}Cs^{+}$ _____ Set 5	Number of protons in Pb^{4+} _____ Set 5	Atomic number of $^{175}_{71}Lu$ _____ Set 5
Number of electrons in a neutral iridium atom _____ Set 5	Mass number of a neutral atom with 49 neutrons and 38 electrons _____ Set 5	Atomic number of thallium _____ Set 5	Number of protons in an atom with atomic number 72 _____ Set 5
Atomic number of a +4 ion with 70 electrons _____ Set 5	Number of electrons in a neutral At atom _____ Set 5	Number of electrons in a neutral atom with atomic number 75 _____ Set 5	Number of protons in a Hg^{+} ion _____ Set 5

BAP7353A

Atomic Structure Puzzle

s u o a

m h . u

a i r c

n t t

c n n o

BAP7353A

Atomic Structure Puzzle

Atomic number of silver _____ Set 6	Number of electrons in a neutral atom with atomic number 58 _____ Set 6	Number of neutrons in $^{97}_{42}Mo$ _____ Set 6	Atomic number of $^{144}_{60}Nd$ _____ Set 6
Number of electrons in a neutral rhodium atom _____ Set 6	Number of neutrons in $^{86}_{37}Rb$ _____ Set 6	Atomic number of a –1 ion having 54 electrons _____ Set 6	Mass number of a neutral atom with 38 neutrons and 31 electrons _____ Set 6
Mass number of an atom with 22 protons, 22 electrons, and 24 neutrons _____ Set 6	Number of protons in an element with atomic number 59 _____ Set 6	Number of electrons in a Cs^{+} ion _____ Set 6	Number of protons in Sn^{4+} _____ Set 6
Number of electrons in a neutral zirconium atom _____ Set 6	Number of electrons in Sn^{2+} _____ Set 6	Number of protons in an Sb^{3+} ion _____ Set 6	Mass number of an ion with 26 protons, 23 electrons and 31 neutrons _____ Set 6
Number of neutrons in a $^{109}Ag^{+}$ ion _____ Set 6	Mass number of $^{63}_{29}Cu$ _____ Set 6	Number of protons in a neutral atom with 68 neutrons and 52 electrons _____ Set 6	Mass number of a Ce^{4+} ion with 82 neutrons and 54 electrons _____ Set 6

BAP7353A

Atomic Structure Puzzle

n	r	o	s
d	v	h	t
a	e	u	i
y	t	w	l
t	e	e	e

BAP7353A

Atomic Structure Puzzle

Number of electrons in a neutral phosphorus atom _____ Set 7	Atomic number of copper _____ Set 7	Number of protons in $^{18}O^{2-}$ _____ Set 7	Mass number of an atom with 12 protons, 12 electrons, and 12 neutrons _____ Set 7
Number of electrons in S^{2-} _____ Set 7	Number of neutrons in an $^{56}Fe^{3+}$ ion _____ Set 7	Number of neutrons for ^{60}Ni _____ Set 7	Number of protons in a neutral atom with 18 neutrons and 16 electrons _____ Set 7
Number of neutrons in ^{59}Ni _____ Set 7	Number of neutrons in $^{68}_{30}Zn$ _____ Set 7	Number of protons in an $^{27}Al^{3+}$ ion _____ Set 7	Mass number of a neutral atom with 17 electrons and 18 neutrons _____ Set 7
Mass number of a –3 ion with 7 neutrons and 10 electrons _____ Set 7	Number of protons in a manganese atom _____ Set 7	Number of electrons in a Sr^{2+} ion _____ Set 7	Number of electrons in a neutral cobalt atom _____ Set 7
Atomic number of a +4 ion having 26 neutrons and 18 electrons _____ Set 7	Atomic number of $^{39}_{19}K$ _____ Set 7	Mass number of an ion with 21 protons, 19 electrons, and 24 neutrons _____ Set 7	Mass number of $^{28}_{14}Si$ _____ Set 7

BAP7353A

Atomic Structure Puzzle

f o h c

o a e u

c a s f

r t o c

t o n t

BAP7353A

Atomic Structure Puzzle

Number of neutrons in $^{105}_{46}Pd$ _____ Set 8	Number of neutrons for ^{91}Zr _____ Set 8	Atomic number of indium _____ Set 8	Mass number of an atom with 32 protons, 32 electrons, and 40 neutrons _____ Set 8
Number of protons in Sn^{2+} _____ Set 8	Number of electrons in a neutral nickel atom _____ Set 8	Mass number of a Cl^- ion with 20 neutrons and 18 electrons _____ Set 8	Mass number of $^{62}_{28}Ni$ _____ Set 8
Atomic number of yttrium _____ Set 8	Number of electrons in a neutral atom with atomic number 25 _____ Set 8	Number of protons in a $^{80}Se^{2-}$ ion _____ Set 8	Number of protons in an element with atomic number 32 _____ Set 8
Number of electrons in $^{56}Fe^{3+}$ _____ Set 8	Number of electrons in a Br^- ion _____ Set 8	Atomic number of a –2 ion having 18 electrons _____ Set 8	Mass number of a neutral atom with 22 neutrons and 20 electrons _____ Set 8
Number of protons in a $^{65}Zn^{2+}$ ion _____ Set 8	Atomic number of $^{91}_{40}Zr$ _____ Set 8	Number of protons in a neutral atom with 49 neutrons and 38 electrons _____ Set 8	Mass number of a +1 ion with 46 electrons and 62 neutrons _____ Set 8

BAP7353A

Atomic Structure Puzzle

i A o u

r n p s

r i x e

f e e

d c . e

BAP7353A

Atomic Structure Puzzle

Number of protons in O^{2-} _____ Set 9	Number of neutrons in ^{7}Li _____ Set 9	Number of neutrons in ^{20}Ne _____ Set 9	Mass number of an atom with 5 protons, 5 electrons, and 6 neutrons _____ Set 9
Atomic number of hydrogen _____ Set 9	Number of electrons in a neutral ^{11}B atom _____ Set 9	Number of electrons in a Sr^{2+} ion _____ Set 9	Atomic number of a +2 ion having 10 electrons _____ Set 9
Number of neutrons in $^{31}_{15}P$ _____ Set 9	Number of protons in a neutral atom with 16 neutrons and 14 electrons _____ Set 9	Number of protons in a carbon atom _____ Set 9	Atomic number of $^{35}_{17}Cl$ _____ Set 9
Number of electrons in a neutral atom with atomic number 15 _____ Set 9	Number of electrons in a neutral nitrogen atom _____ Set 9	Mass number of $^{19}_{9}F$ _____ Set 9	Mass number of a neutral atom with 20 neutrons and 18 electrons _____ Set 9
Number of neutrons in a $^{41}K^{+}$ ion _____ Set 9	Mass number of an ion with 8 protons, 10 electrons, and 10 neutrons _____ Set 9	Mass number of a +2 ion with 34 neutrons and 26 electrons _____ Set 9	Number of protons in an element with atomic number 13 _____ Set 9

BAP7353A

Atomic Structure Puzzle

t u a o

t v s e

o a e t

e h b a

h c m a

BAP7353A

Atomic Structure Puzzle

Number of protons in Sn^{4+} _____ Set 10	Number of neutrons in ^{70}Ge _____ Set 10	Number of neutrons in $^{67}_{30}Zn$ _____ Set 10	Number of neutrons in a $^{59}Ni^{2+}$ ion _____ Set 10
Atomic number of selenium _____ Set 10	Number of electrons in a Rb^{+} ion _____ Set 10	Mass number of an ion with 19 protons, 18 electrons, and 20 neutrons _____ Set 10	Number of electrons in a $^{32}S^{2-}$ ion _____ Set 10
Number of electrons in a neutral potassium atom _____ Set 10	Number of electrons in a neutral atom with atomic number 32 _____ Set 10	Mass number of an atom with 21 protons, 21 electrons, and 24 neutrons _____ Set 10	Number of protons in an element with atomic number 33 _____ Set 10
Atomic number of a +2 ion with 13 neutrons and 10 electrons _____ Set 10	Atomic number of a –1 ion having 54 electrons _____ Set 10	Number of electrons in a Pb^{2+} ion _____ Set 10	Number of protons in an element with atomic number 35 _____ Set 10
Number of protons in a $^{111}Cd^{2+}$ ion _____ Set 10	Atomic number of $^{68}_{30}Zn$ _____ Set 10	Number of protons in a neutral atom with 72 neutrons and 51 electrons _____ Set 10	Mass number of $^{40}_{18}Ar$ _____ Set 10

BAP7353A

Atomic Structure Puzzle

e e p s

a a h n

i t d n

t i w h

s o g ,

BAP7353A

Atomic Structure Puzzle

Number of electrons in P^{3-} _____ Set 11	Number of neutrons in $^{59}_{27}Co$ _____ Set 11	Mass number of an atom with 9 protons, 9 electrons, and 10 neutrons _____ Set 11	Number of electrons in a Cu^{2+} ion _____ Set 11
Number of electrons in a neutral titanium atom _____ Set 11	Number of protons in S^{2-} _____ Set 11	Number of neutrons in ^{29}Si _____ Set 11	Number of protons in $^{40}Ca^{2+}$ _____ Set 11
Atomic number for neon _____ Set 11	Atomic number of a +6 ion having 18 electrons _____ Set 11	Number of protons in a neutral atom with 6 neutrons and 6 electrons _____ Set 11	Number of electrons in a neutral bromine atom _____ Set 11
Number of electrons in a neutral ^{19}F atom _____ Set 11	Number of neutrons in a $^{26}Mg^{2+}$ ion _____ Set 11	Mass number of a +1 ion with 4 neutrons and 2 electrons _____ Set 11	Number of protons in an element with atomic number 23 _____ Set 11
Mass number of an atom with 5 protons, 5 electrons, and 6 neutrons _____ Set 11	Atomic number of $^{56}_{26}Fe$ _____ Set 11	Mass number of a +2 ion with 12 protons, 10 electrons, and 13 neutrons _____ Set 11	Mass number of $^{21}_{10}Ne$ _____ Set 11

BAP7353A

Atomic Structure Puzzle

h t a n

i c o u

n l t h

e l y t

n o c e

BAP7353A

Atomic Structure Puzzle

Mass number of an atom with 14 electrons, 14 protons, and 16 neutrons _____ Set 12	Number of protons in ^{59}Co _____ Set 12	Number of electrons in a neutral potassium atom _____ Set 12	Number of electrons in $^{31}P^{3-}$ _____ Set 12
Atomic number of iron _____ Set 12	Number of neutrons in $^{23}_{11}Na$ _____ Set 12	Number of protons in a Ca^{2+} ion _____ Set 12	Number of electrons in an $^{27}Al^{3+}$ ion _____ Set 12
Atomic number of a +2 ion having 27 electrons _____ Set 12	Number of protons in a $^{59}Ni^{2+}$ ion _____ Set 12	Number of electrons in a neutral titanium atom _____ Set 12	Mass number of a neutral atom with 18 neutrons and 16 electrons _____ Set 12
Number of protons in $^{31}P^{3-}$ _____ Set 12	Number of protons in an element with atomic number 9 _____ Set 12	Number of protons in $^{52}Cr^{3+}$ _____ Set 12	Atomic number of $^{51}_{23}V$ _____ Set 12
Mass number of a –1 ion with 18 neutrons and 18 electrons _____ Set 12	Mass number of an ion with 15 protons, 18 electrons, and 16 neutrons _____ Set 12	Number of electrons in a neutral atom with atomic number 25 _____ Set 12	Mass number of $^{33}_{16}S$ _____ Set 12

BAP7353A

Atomic Structure Puzzle

t h e A

e e i r

d f .

u t g n

i u n e

BAP7353A

Atomic Structure Puzzle

Number of protons in a neutral atom with 75 neutrons and 54 electrons _____ Set 13	Mass number of an atom with 64 protons, 64 electrons, and 92 neutrons _____ Set 13	Atomic number of erbium _____ Set 13	Number of neutrons in ^{203}Tl _____ Set 13
Atomic number of a +1 ion having 54 electrons _____ Set 13	Number of neutrons in ^{178}Hf _____ Set 13	Number of electrons in a neutral atom with atomic number 59 _____ Set 13	Number of electrons for Fr^{+} _____ Set 13
Number of protons in a neutral atom with 120 neutrons and 80 electrons _____ Set 13	Number of protons in an element with atomic number 77 _____ Set 13	Number of electrons in a neutral gold atom _____ Set 13	Number of neutrons in $^{137}Ba^{2+}$ _____ Set 13
Mass number of a –1 ion with 54 electrons and 74 neutrons _____ Set 13	Number of electrons in a Pb^{4+} ion _____ Set 13	Mass number of $^{130}_{54}Xe$ _____ Set 13	Mass number of a neutral atom with 87 neutrons and 62 electrons _____ Set 13
Atomic number of $^{183}_{74}W$ _____ Set 13	Number of electrons in a neutral gadolinium atom _____ Set 13	Mass number of an ion with 80 protons, 78 electrons, and 120 neutrons _____ Set 13	Number of neutrons in $^{193}_{77}Ir$ _____ Set 13

BAP7353A

Atomic Structure Puzzle

e c r a

r n e i

, c e e

e b n m

m , s i

Atomic Structure Puzzle

Number of neutrons in $^{73}_{32}Ge$ _____ Set 14	Number of electrons in a neutral bismuth atom _____ Set 14	Number of protons in a neutral atom with 70 neutrons and 51 electrons _____ Set 14	Mass number of a neutral atom with 120 neutrons and 80 electrons _____ Set 14
Atomic number of silicon _____ Set 14	Number of electrons in a neutral cadmium atom _____ Set 14	Number of neutrons in a $^{88}Sr^{2+}$ ion _____ Set 14	Number of neutrons in ^{59}Co _____ Set 14
Number of electrons in a O^{2-} ion _____ Set 14	Mass number of a +4 ion with 109 neutrons and 70 electrons _____ Set 14	Number of protons in $^{31}P^{3-}$ _____ Set 14	Number of protons in a $^{44}Ca^{2+}$ ion _____ Set 14
Number of protons in an element with atomic number 46 _____ Set 14	Number of electrons for S^{2-} _____ Set 14	Atomic number of $^{99}_{44}Ru$ _____ Set 14	Number of electrons in a neutral atom with atomic number 39 _____ Set 14
Atomic number of a –1 ion having 36 electrons _____ Set 14	Mass number of $^{93}_{41}Nb$ _____ Set 14	Mass number of an atom with 36 protons, 36 electrons, and 46 neutrons _____ Set 14	Mass number of an ion with 29 protons, 27 electrons, and 34 neutrons _____ Set 14

BAP7353A

Atomic Structure Puzzle

i n s y

o o l a

s s t l

l a t s

g a i n

BAP7353A

Atomic Structure Puzzle

Number of electrons in a neutral tellurium atom _____ Set 15	Mass number of a –2 ion with 9 neutrons and 10 electrons _____ Set 15	Number of electrons for P^{3-} _____ Set 15	Number of electrons in a neutral ytterbium atom _____ Set 15
Number of neutrons in ^{58}Fe _____ Set 15	Atomic number of mercury _____ Set 15	Number of electrons in a neutral atom with atomic number 40 _____ Set 15	Number of protons in a $^{122}Sn^{2+}$ ion _____ Set 15
Number of electrons in a N^{3-} ion _____ Set 15	Atomic number of a –2 ion having 58 electrons _____ Set 15	Number of neutrons in $^{87}_{38}Sr$ _____ Set 15	Atomic number of $^{78}_{34}Se$ ion _____ Set 15
Mass number of a neutral atom with 98 neutrons and 67 electrons _____ Set 15	Number of protons in an element with atomic number 46 _____ Set 15	Number of protons in $^{32}S^{2-}$ _____ Set 15	Mass number of an ion with 28 protons, 26 electrons, and 32 neutrons _____ Set 15
Number of neutrons in a $^{44}Ca^{2+}$ ion _____ Set 15	Mass number of an atom with 42 electrons, 42 protons, and 55 neutrons _____ Set 15	Mass number of $^{48}_{22}Ti$ _____ Set 15	Number of protons in a neutral atom with 72 neutrons and 51 electrons _____ Set 15

BAP7353A

Atomic Structure Puzzle

o e s e

f . m u

l l d s

R u r

r A e f

BAP7353A