

## Radioactive Decay Worksheet

For each section, write out the complete equation for 5 random equations. For the others, put only the daughter nuclide which results from the decay. Using a periodic table is helpful.

### Alpha Decay

1.  ${}_{84}^{208}\text{Po}$  2.  ${}_{86}^{211}\text{Rn}$  3.  ${}_{87}^{211}\text{Fr}$  4.  ${}_{88}^{222}\text{Ra}$  5.  ${}_{89}^{225}\text{Ac}$  6.  ${}_{91}^{227}\text{Pa}$  7.  ${}_{91}^{231}\text{Pa}$
8.  ${}_{92}^{233}\text{U}$  9.  ${}_{93}^{237}\text{Np}$  10.  ${}_{94}^{239}\text{Pu}$  11.  ${}_{95}^{241}\text{Am}$  12.  ${}_{96}^{240}\text{Cm}$  13.  ${}_{97}^{247}\text{Bk}$  14.  ${}_{98}^{251}\text{Cf}$
15.  ${}_{99}^{252}\text{Es}$  16.  ${}_{100}^{257}\text{Fm}$  17.  ${}_{101}^{255}\text{Md}$  18.  ${}_{102}^{255}\text{No}$  19.  ${}_{103}^{256}\text{Lr}$

### Beta Decay

20.  ${}_{2}^{6}\text{He}$  21.  ${}_{3}^{8}\text{Li}$  22.  ${}_{4}^{10}\text{Be}$  23.  ${}_{5}^{13}\text{B}$  24.  ${}_{6}^{14}\text{C}$  25.  ${}_{7}^{16}\text{N}$  26.  ${}_{8}^{19}\text{O}$
27.  ${}_{9}^{20}\text{F}$  28.  ${}_{11}^{24}\text{Na}$  29.  ${}_{15}^{32}\text{P}$  30.  ${}_{16}^{35}\text{S}$  31.  ${}_{19}^{42}\text{K}$  32.  ${}_{26}^{52}\text{Fe}$  33.  ${}_{27}^{60}\text{Co}$
34.  ${}_{35}^{82}\text{Br}$  35.  ${}_{38}^{90}\text{Sr}$  36.  ${}_{43}^{99}\text{Tc}$  37.  ${}_{53}^{131}\text{I}$  38.  ${}_{55}^{137}\text{Cs}$  39.  ${}_{77}^{192}\text{Ir}$  40.  ${}_{79}^{201}\text{Au}$

### Electron Capture

41.  ${}_{18}^{37}\text{Ar}$  42.  ${}_{23}^{50}\text{V}$  43.  ${}_{24}^{51}\text{Cr}$  44.  ${}_{27}^{57}\text{Co}$  45.  ${}_{28}^{56}\text{Ni}$  46.  ${}_{31}^{67}\text{Ga}$  47.  ${}_{33}^{73}\text{As}$
48.  ${}_{36}^{81}\text{Kr}$  49.  ${}_{38}^{80}\text{Sr}$  50.  ${}_{41}^{91}\text{Nb}$  51.  ${}_{44}^{97}\text{Ru}$  52.  ${}_{53}^{125}\text{I}$  53.  ${}_{56}^{128}\text{Ba}$  54.  ${}_{62}^{145}\text{Sm}$
55.  ${}_{69}^{168}\text{Tm}$  56.  ${}_{84}^{200}\text{Po}$  57.  ${}_{94}^{235}\text{Pu}$  58.  ${}_{96}^{239}\text{Cm}$  59.  ${}_{97}^{244}\text{Bk}$  60.  ${}_{99}^{247}\text{Es}$  61.  ${}_{101}^{257}\text{Md}$

### Positron Decay

62.  ${}_{7}^{13}\text{N}$  63.  ${}_{8}^{15}\text{O}$  64.  ${}_{9}^{18}\text{F}$  65.  ${}_{10}^{19}\text{Ne}$  66.  ${}_{11}^{21}\text{Na}$  67.  ${}_{12}^{23}\text{Mg}$  68.  ${}_{13}^{25}\text{Al}$
69.  ${}_{14}^{27}\text{Si}$  70.  ${}_{15}^{30}\text{P}$  71.  ${}_{16}^{30}\text{S}$  72.  ${}_{19}^{37}\text{K}$  73.  ${}_{20}^{39}\text{Ca}$  74.  ${}_{21}^{42}\text{Sc}$  75.  ${}_{22}^{45}\text{Ti}$
76.  ${}_{27}^{54}\text{Co}$  77.  ${}_{29}^{60}\text{Cu}$  78.  ${}_{30}^{61}\text{Zn}$  79.  ${}_{38}^{83}\text{Sr}$  80.  ${}_{31}^{68}\text{Ga}$  81.  ${}_{35}^{75}\text{Br}$  82.  ${}_{66}^{155}\text{Dy}$