Department of Chemistry
University of Texas at Austin

Name:_____

Balancing Decay Practice – Supplemental Worksheet

Balance the following nuclear reactions by putting in the missing nuclide or particle

1. $^{4}_{2}He + ^{14}_{7}N \rightarrow ^{17}_{8}O + ?$

2. $^{4}_{2}He + ^{9}_{4}Be \rightarrow ? + ^{1}_{0}n$

3. $^{235}_{92}U + ^{1}_{0}n \rightarrow ^{144}_{56}Ba + ? + 3^{1}_{0}n$

4. $^{2}_{1}D + ^{3}_{1}T \rightarrow ? + ^{1}_{0}n$

5. $? \rightarrow ^{234}_{90}Th + ^{4}_{2}He$

6. $^{124}_{53}I \rightarrow ^{0}_{1}\beta + ?$

7. $^{197}_{79}Au + ^{1}_{0}n \rightarrow ?$

8. $^{6}_{3}Li + ? \rightarrow 2^{4}_{2}He$

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For the following predict the decay products

6. Alpha decay of Rn-222

7. Beta minus decay of Pd-123

8. Alpha decay of Cf-240

9. Positron emission from C-11

10. Electron capture of Am-242

11. Beta (-) decay of C-14

12. Beta(-) decay of Cs-137

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