

# Station 1— $\alpha$ decay

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The following radioisotopes undergo alpha decay. Write the equations:

Polonium-211

Thorium-232

Bismuth-214

Protactinium-225

# Station 2— $\beta$ decay

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Write the equation for the beta decay of:

Uranium-233

Nickel-63

Krypton-87

Actinium-228

## Station 3— $\beta^+$ emission (positron)

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Write the equation for the positron emission of:

Yttrium-83

Boron-8

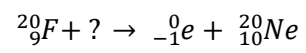
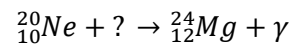
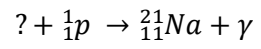
Holmium-158

Titanium-43

# Station 4— $\gamma$ decay

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Complete the equations for the following:



# Station 5—Electron capture

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Write the equation for the electron capture of:

Krypton-81

Curium-239

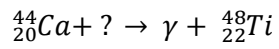
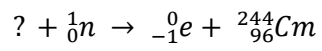
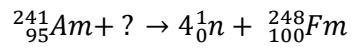
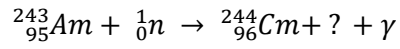
Argon-38

Iodine-125

# Station 6—Transmutation reactions

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Complete the following equations:



# Station 7—More equation writing!

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Determine the particle emitted and write the balanced equation for the transmutation of:

Sodium-24 to magnesium-24

Thorium-228 to radium-224

Phosphorus-29 to silicon-29

Scandium-43 to calcium-42

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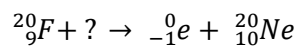
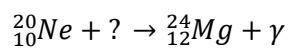
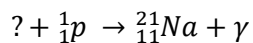
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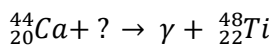
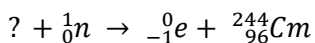
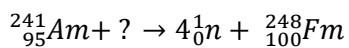
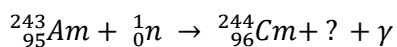
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