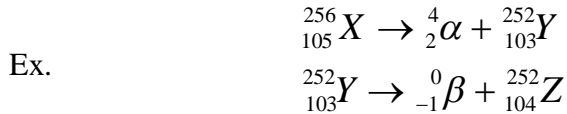


## Decay Series

For the nuclide given, complete the given decay series, showing each step along the way.



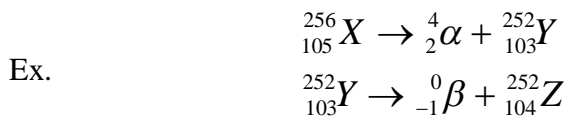
${}_{94}^{239}Pu$  from the Actinium Series

$\alpha - \alpha - \beta - \alpha - \beta - \alpha - \alpha - \alpha - \alpha - \beta - \alpha - \beta$

1. How many generations are in the series?
2. Construct a Mass Number vs. Atomic Number graph (see pg. 477) for your nuclide. Data points should include the initial parent  ${}_{94}^{239}Pu$  and each subsequent daughter.

## Decay Series

For the nuclide given, complete the given decay series, showing each step along the way.



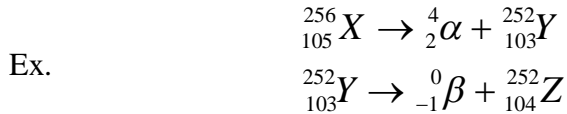
${}_{92}^{238}U$  from the Radium (aka Uranium) Series

$\alpha - \beta - \beta - \alpha - \alpha - \alpha - \alpha - \alpha - \beta - \beta - \alpha - \beta - \beta - \alpha$

1. How many generations are in the series?
2. Construct a Mass Number vs. Atomic Number graph (see pg. 477) for your nuclide. Data points should include the initial parent  ${}_{92}^{238}U$  and each subsequent daughter.

## Decay Series

For the nuclide given, complete the given decay series, showing each step along the way.



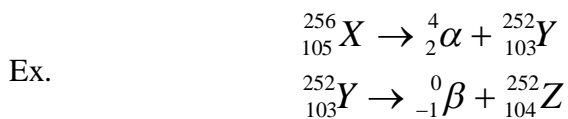
${}_{98}^{252}\text{Cf}$  from the Thorium Series

$\alpha - \alpha - \alpha - \beta - \beta - \alpha - \alpha - \alpha - \beta - \beta - \alpha - \alpha - \alpha - \alpha - \beta - \beta - \alpha$

1. How many generations are in the series?
2. Construct a Mass Number vs. Atomic Number graph (see pg. 477) for your nuclide. Data points should include the initial parent  ${}_{98}^{252}\text{Cf}$  and each subsequent daughter.

## Decay Series

For the nuclide given, complete the given decay series, showing each step along the way.



${}_{98}^{249}\text{Cf}$  from the Neptunium Series

$\alpha - \alpha - \beta - \alpha - \alpha - \beta - \alpha - \alpha - \beta - \alpha - \alpha - \alpha - \alpha - \beta - \beta - \alpha$

1. How many generations are in the series?
2. Construct a Mass Number vs. Atomic Number graph (see pg. 477) for your nuclide. Data points should include the initial parent  ${}_{98}^{249}\text{Cf}$  and each subsequent daughter.