

## 3-4 Practice Problems

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1. Write a nuclear equation for the alpha decay of  ${}_{91}^{231}\text{Pa}$ .
2. Write a nuclear equation for the beta decay of  ${}_{87}^{223}\text{Fr}$ .
3. Write a nuclear equation for the alpha decay of  ${}_{62}^{149}\text{Sm}$ .
4. Write a nuclear equation for the beta decay of  ${}_{61}^{165}\text{Pm}$ .
5. Write a nuclear equation for the alpha decay of  ${}_{101}^{249}\text{Md}$ .
6. Write a nuclear equation for the alpha decay of  ${}_{62}^{146}\text{Sm}$ .
7. Write a nuclear equation for the beta decay of  ${}_{85}^{198}\text{At}$ .
8. Write a nuclear equation for the alpha decay of  ${}_{64}^{150}\text{Gd}$ .
9. Write a nuclear equation for the beta decay of  ${}_{54}^{152}\text{Xe}$ .
10. Write a nuclear equation for the beta decay of  ${}_{55}^{120}\text{Cs}$ .