**SPH3U 7.3 Half-Life**

1. **Half-life**

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| Half-life: |  |
| Rate of decay |  |
| equation |  |

Neon-19 has a half-life of 17.22 s. What mass of neon-19 will remain from a 100 mg initial sample after 30 s?

A 100 mg sample of magnesium-27 decays by 7% of its previous mass every minute. Determine its half-life and state the half-life decay equation.

|  |  |  |
| --- | --- | --- |
| Time (min) | Initial mass (mg) | Final mass (mg) |
| 0 |  |  |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |

1. **Applications of half-life: Carbon dating**

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| Carbon-14: |  |
| carbon-14 decay |  |
| carbon-14 absorption |  |
| application |  |

|  |  |
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| Aluminum-26: |  |
| al-26 decay |  |
| application |  |

**Homework:** page 333: #1-4