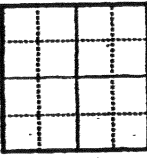
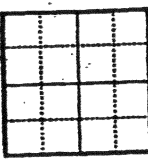
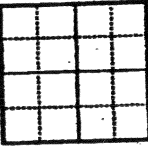
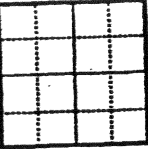
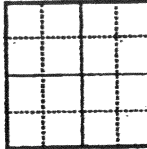
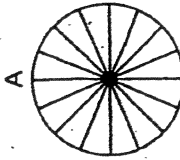
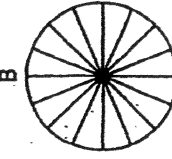
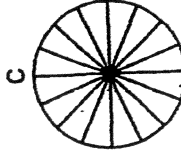
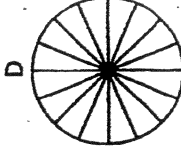
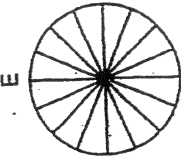


Half-Life Carbon - 14

Directions: Complete the following tables and graphs. Use one color for Carbon-14, the radioactive element. Use a different color for the decay product, Nitrogen-14.

Beginning Time = 0 years	1 Half-Life Time = _____ years	2 Half-Lives Total time = <u>11,400</u> yrs.	3 Half-Lives Total time = _____ yrs.	4 Half-Lives Total time = _____ yrs.
				
Fraction All radioactive element No decay product	Fraction $\frac{1}{2}$ radioactive element $\frac{1}{2}$ decay product	Fraction $\frac{1}{4}$ radioactive element $\frac{3}{4}$ decay product	Fraction $\frac{1}{8}$ radioactive element $\frac{7}{8}$ decay product	Fraction $\frac{1}{16}$ radioactive element $\frac{15}{16}$ decay product
				
Percent 100% radioactive elem. 0% decay product	Percent 50% radioactive elem. 50% decay product	Percent 25% radioactive elem. 75% decay product	Percent 12.5% radioactive elem. 87.5% decay product	Percent 6.25% radioactive elem. 93.75% decay product

Radioactive Isotope (The light part)	Decay Product (The dark part)	% Remaining (Light)	% Changed (Dark)	Time (Half Lives)	Time (Years)	Time (Exponential)
1. <u>Carbon-14</u>	<u>Nitrogen-14</u>	<u>25%</u>	<u>75%</u>	<u>2</u>	<u>11,400 years</u>	<u>1.14×10^4 years</u>
2. <u>Carbon-14</u>				<u>1</u>		
3. <u>Carbon-14</u>				<u>4</u>		
4. <u>Carbon-14</u>					<u>17,100 years</u>	
5. _____		<u>50%</u>				<u>4.5×10^9 years</u>
6. <u>Uranium-238</u>				<u>3</u>		
7. <u>Potassium-40</u>					<u>2,600,000,000 years</u>	
8. <u>Rubidium-87</u>						

(Pick a number. ↓)

9. Define Half Life: _____