Chemistry 115 Name

Dr. Cary Willard

Quiz 9a (20 points) November 28, 2012

1. (6 points) Represent each of the following using atomic notation
	1. Alpha particle
	2. Beta particle
	3. Gamma ray
2. (5 points) Write an equation for the alpha decay of tungsten-160, $$ .
3. (4 points) If 200 mg of iron-59 is injected into a tumor, how many mg of the sample will remain after 300 days if the half-life of iron-59 is 75 days?
4. (6 points) 65.2 mL of a 0.9523 M solution of magnesium bromide are allowed to react with excess silver nitrate, how many grams of silver bromide will be formed?

MgBr2(aq) + 2 AgNO3(aq) 🡪 2 AgBr(s) + Mg(NO3)2(aq)

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Quiz 9b (20 points) November 28, 2012

1. (6 points) Represent each of the following using atomic notation
	1. Alpha particle
	2. Beta particle
	3. Gamma ray
2. (5 points) Write an equation for the alpha decay of thorium-225, $$ .
3. (4 points) If 200 mg of iron-59 is injected into a tumor, how many mg of the sample will remain after 225 days if the half-life of iron-59 is 75 days?
4. (6 points) 81.5 mL of a 0.9523 M solution of magnesium bromide are allowed to react with excess silver nitrate, how many grams of silver bromide will be formed?

MgBr2(aq) + 2 AgNO3(aq) 🡪 2 AgBr(s) + Mg(NO3)2(aq)

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Quiz 9c (20 points) November 28, 2012

1. (6 points) Represent each of the following using atomic notation
	1. Alpha particle
	2. Beta particle
	3. Gamma ray
2. (5 points) Write an equation for the beta decay of iodine-121, $$ .
3. (4 points) If 400 mg of cesium-131 is injected into a tumor, how many mg of the sample will remain after 30 days if the half-life of cesium-131 is 10 days?
4. (6 points) How many mL of a 0.7399 M solution of magnesium bromide are required to react with 58.4 g of silver nitrate?

MgBr2(aq) + 2 AgNO3(aq) 🡪 2 AgBr(s) + Mg(NO3)2(aq)

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Quiz 9d (20 points) November 28, 2012

1. (6 points) Represent each of the following using atomic notation
	1. Alpha particle
	2. Beta particle
	3. Gamma ray
2. (5 points) Write an equation for the beta decay of strontium-90, $$ .
3. (4 points) If 400 mg of cesium-131 is injected into a tumor, how many mg of the sample will remain after 40 days if the half-life of cesium-131 is 10 days?
4. (6 points) How many mL of a 0.7399 M solution of magnesium bromide are required to react with 41.8 g of silver nitrate?

MgBr2(aq) + 2 AgNO3(aq) 🡪 2 AgBr(s) + Mg(NO3)2(aq)