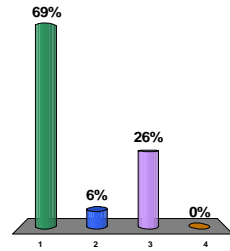


In class activities

January 28, 2010
Morning results

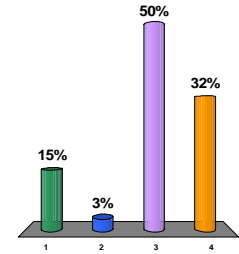
In the nucleus of an atom, the strong force is a relatively

1. A short-range force.
2. long-range force.
3. unstable force.
4. D. neutralizing force.



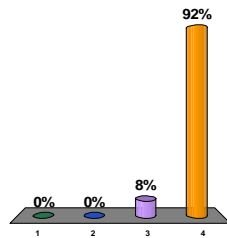
The strong force acts between

1. A. protons.
2. neutrons.
3. nucleons.
4. D. all of the above.



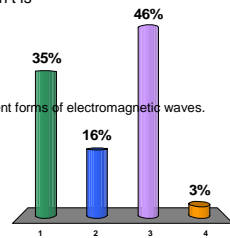
The radioactive decay of nature's elements occurs in the

1. A. soil we walk on.
2. air we breathe.
3. interior of Earth.
4. D. all of the above.



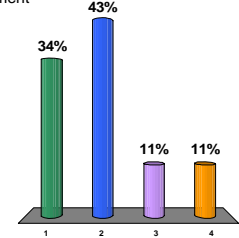
Of alpha, beta, and gamma radiation, two are high-speed particles, and the one that isn't is

1. A. alpha.
2. beta.
3. gamma.
4. D. all of the above are different forms of electromagnetic waves.



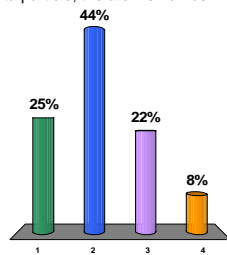
When an element ejects an alpha particle, the mass number of the resulting element

1. A. reduces by 2.
2. reduces by 4.
3. increases by 2.
4. D. increases by 4.



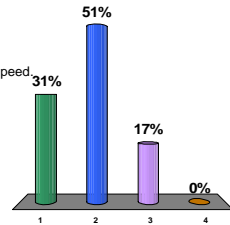
When an element ejects a beta particle, the atomic number of that element

1. A. reduces by 1.
2. increases by 1.
3. reduces by 2.
4. D. increases by 2.



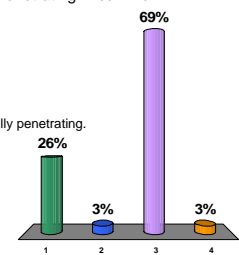
Which of these is actually a high-speed electron?

1. A. Alpha.
2. Beta.
3. Gamma.
4. D. All of the above are high speed.



Which of these is the most penetrating in common materials?

1. A. Alpha.
2. Beta.
3. Gamma.
4. D. All of the above are equally penetrating.



morning class didn't get to the last 5 slides

When thorium-234 emits a beta particle, thorium transforms to

1. A. protactinium-232.
2. protactinium-233.
3. **protactinium-234.**
4. D. protactinium-235.

Option	Percentage
1	0%
2	6%
3	86%
4	9%

Which of these radioactive elements is gaseous at everyday temperatures?

1. A. Uranium.
2. Plutonium.
3. Radium.
4. **D. Radon.**

Option	Percentage
1	25%
2	25%
3	25%
4	25%

When food is exposed to gamma radiation, the food

1. A. unfortunately becomes slightly radioactive.
2. **doesn't become radioactive at all.**
3. will spoil faster.
4. D. becomes quite radioactive and should be avoided by health-conscious people.

Option	Percentage
1	25%
2	25%
3	25%
4	25%

A certain isotope has a half-life of one day. This means the amount of that isotope remaining at the end of three days will be

1. A. zero.
2. one-quarter.
3. half.
4. **D. one-eighth.**

Option	Percentage
1	25%
2	25%
3	25%
4	25%

The half-life of uranium-238 is 4.5 billion years. Compared with the amount of uranium-238 in the Earth today, only half this amount will exist in

1. A. less than 4.5 billion years.
2. **4.5 billion years.**
3. more than 4.5 billion years.
4. D. none of the above.

Option	Percentage
1	25%
2	25%
3	25%
4	25%

When uranium-238 emits an alpha particle, uranium transforms to

1. A. thorium-242.
2. thorium-238.
3. **thorium-234.**
4. D. any of the above thorium isotopes.

Option	Percentage
1	25%
2	25%
3	25%
4	25%