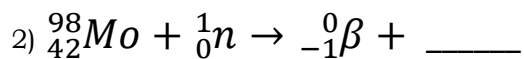
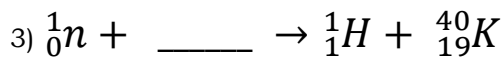


Transmutation

Name: _____

Part 1: Fill in the blank in each transmutation reaction with the correct particle, and label each particle as the target, projectile, product, or ejected particle.



Part 2: Rewrite the following reactions in symbol form:

5) An iron-58 is hit by a bismuth-209 nucleus to form meitnerium-266 and a neutron.

6) A molybdenum-96 atom is hit by deuterium (hydrogen-2) to form technetium-97 and a neutron.

7) When californium-249 is collided with an oxygen-18, the products are seaborgium-263 and several neutrons.

8) Hitting plutonium-239 with an alpha particle will make americium-241, a proton and a neutron.

9) A lead-218 atom decomposes by alpha decay to produce what new nucleus?

10) A neutron is fired at a uranium-235 atom, where the atom splits apart into what product atom along with zirconium-97 and 2 neutrons?

Transmutation

Name: _____

Part 1: Fill in the blank in each transmutation reaction with the correct particle, and label each particle as the target, projectile, product, or ejected particle.



Part 2: Rewrite the following reactions in symbol form:

5) Write the reaction that shows the formation of copernicium-285 and 3 neutrons by colliding uranium-238 with a projectile. Determine the projectile.

6) A tungsten-184 atom is hit by tritium (hydrogen-3) to form rhenium-185 and 2 neutrons.

7) A possible fusion reaction collides helium-5 with lithium-8 to form boron-11 and 2 neutrons.

8) Hitting plutonium-239 with an alpha particle will make americium-241, a proton and a neutron.

9) Write the alpha decay reaction of polonium-210.

10) A neutron is fired at a plutonium-239 atom, where the atom splits apart into what product atom along with molybdenum-98 and 3 neutrons?