

Conceptual Physics
Chapter 17: The Atomic Nature of Matter
Lab 17.2: Building an Atom (PHET simulation)



PART I: ATOM SCREEN

1. Go to the website: phet.colorado.edu. Click on HTML5 simulations on top right of screen and choose the Build an Atom simulation (<http://phet.colorado.edu/en/simulation/build-an-atom>)
2. Explore the Build an Atom simulation with your group. As you explore, talk about what you find. List two things your group observed in the simulation.
 - a. _____
 - b. _____
3. Click on the + sign for each of the boxes (element name, net charge and mass number) to view changes as you change the number of particles in the atom.
4. What particle(s) are found in the center of the atom? _____
5. Play until you discover which **p**article(s) determine(s) the name of the **e**lement you build. _____
6. What is the name of the following atoms?
 - a. An atom with 3 protons and 4 neutrons: _____
 - b. An atom with 2 protons and 4 neutrons: _____
 - c. An atom with 4 protons and 4 neutrons: _____
7. Play with the simulation to discover which particles affect the **charge** of an atom or ion. _____
8. Fill in the blanks below to show your results:
 - a. Neutral atoms have _____ the same number of _____ protons and electrons.
 - b. Positive ions have _____ protons than electrons.
 - c. Negative ions have _____ protons than electrons.
9. Develop a relationship (in the form of a single sentence or equation) that can predict the charge based on the number and types of particle. _____
10. Play with the simulation to discover what affects the **mass** number of your atom or ion. _____
 - a. What is a rule for determining the mass number of an atom or ion? _____
11. Practice applying your understanding by playing 1st and 2nd levels on the game screen.

Conceptual Physics Chapter 17 Answers

Guillaume Favre



Conceptual Physics Chapter 17 Answers:

Unveiling the Power of Verbal Beauty: An Emotional Sojourn through **Conceptual Physics Chapter 17 Answers**

In some sort of inundated with screens and the cacophony of instantaneous conversation, the profound energy and psychological resonance of verbal artistry often disappear in to obscurity, eclipsed by the continuous onslaught of sound and distractions. Yet, located within the lyrical pages of **Conceptual Physics Chapter 17 Answers**, a charming work of fictional elegance that pulses with organic thoughts, lies an remarkable trip waiting to be embarked upon. Penned with a virtuoso wordsmith, that magical opus guides visitors on a psychological odyssey, gently revealing the latent possible and profound affect embedded within the delicate internet of language. Within the heart-wrenching expanse of this evocative evaluation, we can embark upon an introspective exploration of the book is main subjects, dissect its fascinating writing design, and immerse ourselves in the indelible effect it leaves upon the depths of readers souls.

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