

4: EATING BIG, UGLY, SCARY WORDS FOR LUNCH

Crack these scary-sounding sentences to reveal some common expressions and famous sayings. Have a dictionary close at hand or use an online dictionary when you need help with a word. (You will probably need help with several words to complete this exercise.) If you get stuck on one of these, pass it up and come back to it at the end. If you still can't get it even after you have defined all the words then you may ask a parent, teacher or another student for help. (If you are not familiar with a saying you may require the help of someone a little older.)

1. Present precipitation comprises felines and canines.
2. The proto-avian acquires the oligochaete.
3. A minted disk of elemental copper alloy preserved is the same procured.
4. Every agglomeration of atmospheric condensate has an apparent aura of *argentum*.
5. Do not enumerate your barnyard fowl before they emerge from their ova.
6. That is an equine reflecting a dissimilar wavelength of electromagnetic radiation.
7. Do not lacrimate due to a capsized vessel of bovine lactic fluid.

5: THE SPACE-TRAVELING WEIGHT-LOSS PROGRAM

Write the weight you read from your bathroom scale here. If you don't have a bathroom scale, give your best estimate: _____ lbs

Notice that lbs stands for pounds. Sometimes you will see the symbol # being used for weight in pounds. As a rule, if you see the symbol written after a number, like this:

145#

it means "145 pounds."

But if you see a number written like this

#145

it means "number 145," as in, "I've been standing in this line for hours and I'm still #145!"

Use the graph (on the next page) and your ruler (in your lab kit) to figure out your mass in

kilograms from your weight in pounds. Here is a reminder of how to do it:

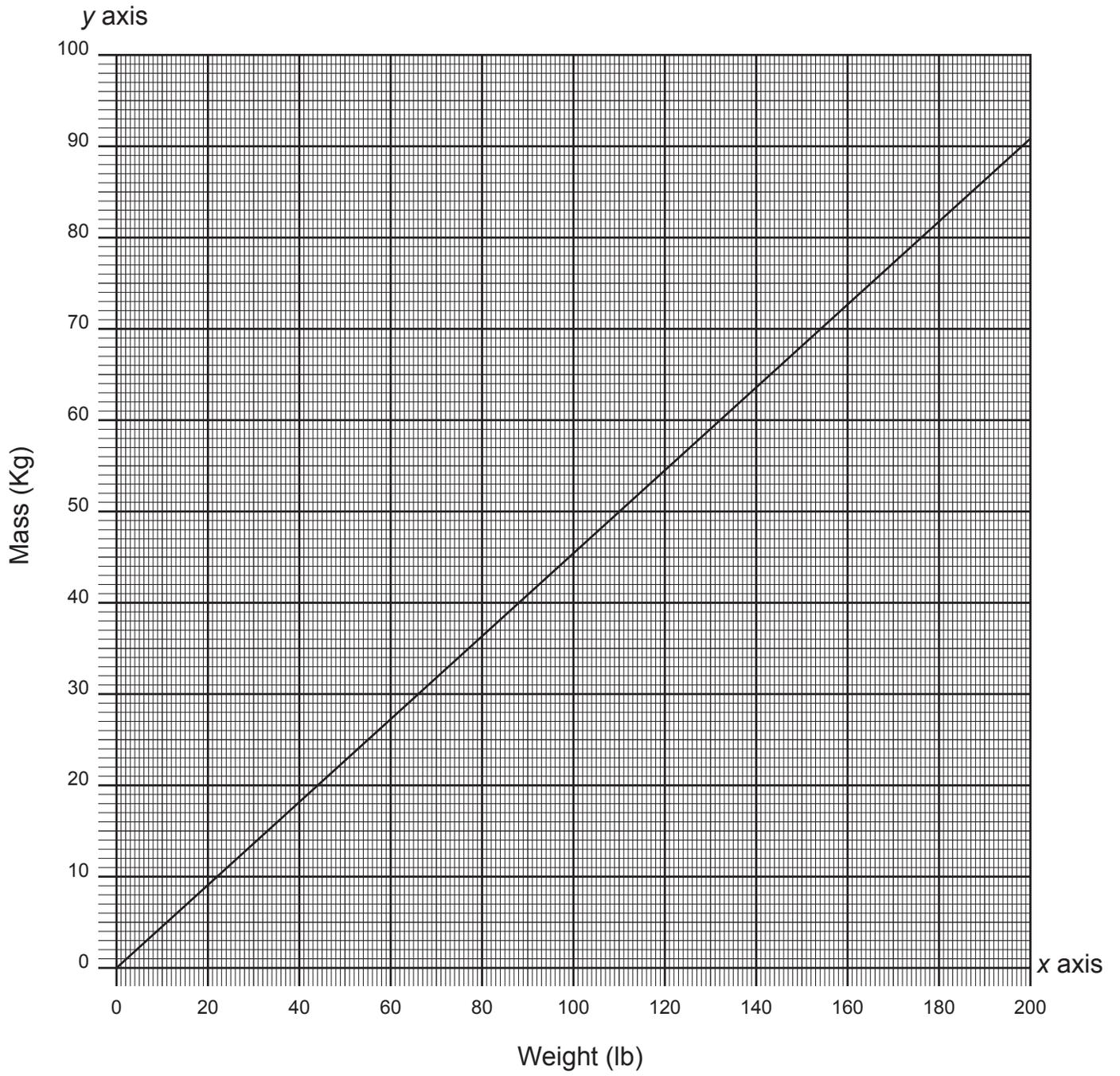
1. Draw a vertical (up and down) line from your weight in pounds on the x axis up to the diagonal line on the graph.
2. From that point on the graph, draw a horizontal (left and right) line over to the y axis.
3. Read the number of kilograms from the point where your line crosses the y axis.

Write your mass in kilograms that you got from the graph: _____ kg

Notice that kg stands for kilograms. Some people prefer Kg over kg. You may see it either way.

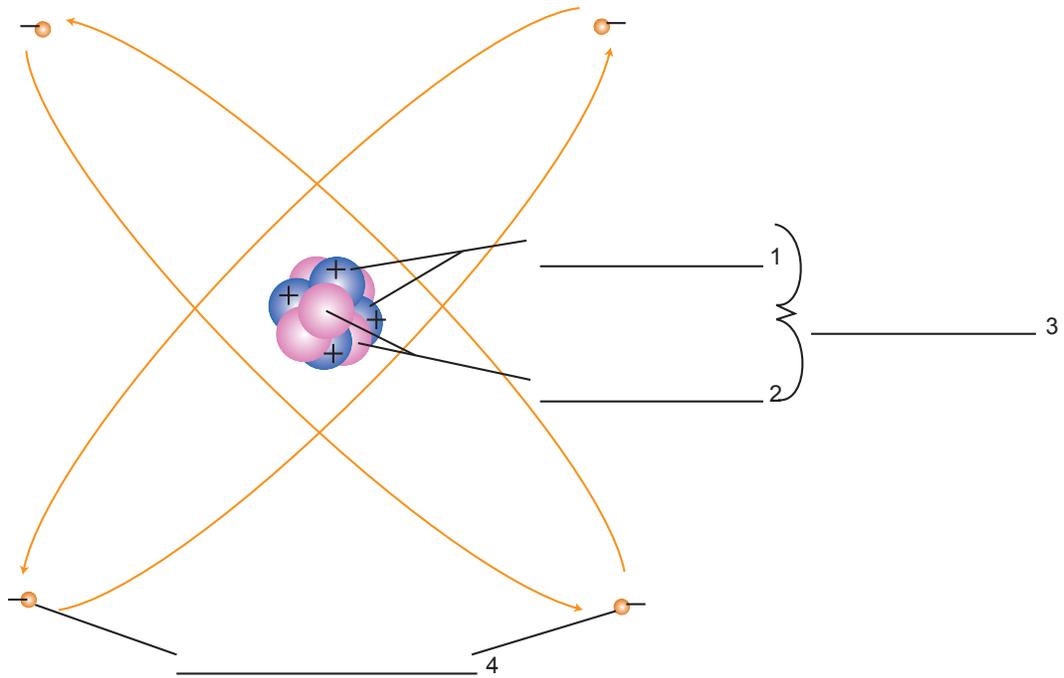
Write your calculated mass in kilograms (pounds \div 2.2) here: _____ kg

Is the calculated number of kilograms within one kilogram of the number you got from the graph? If not, get some help to get the right answer.

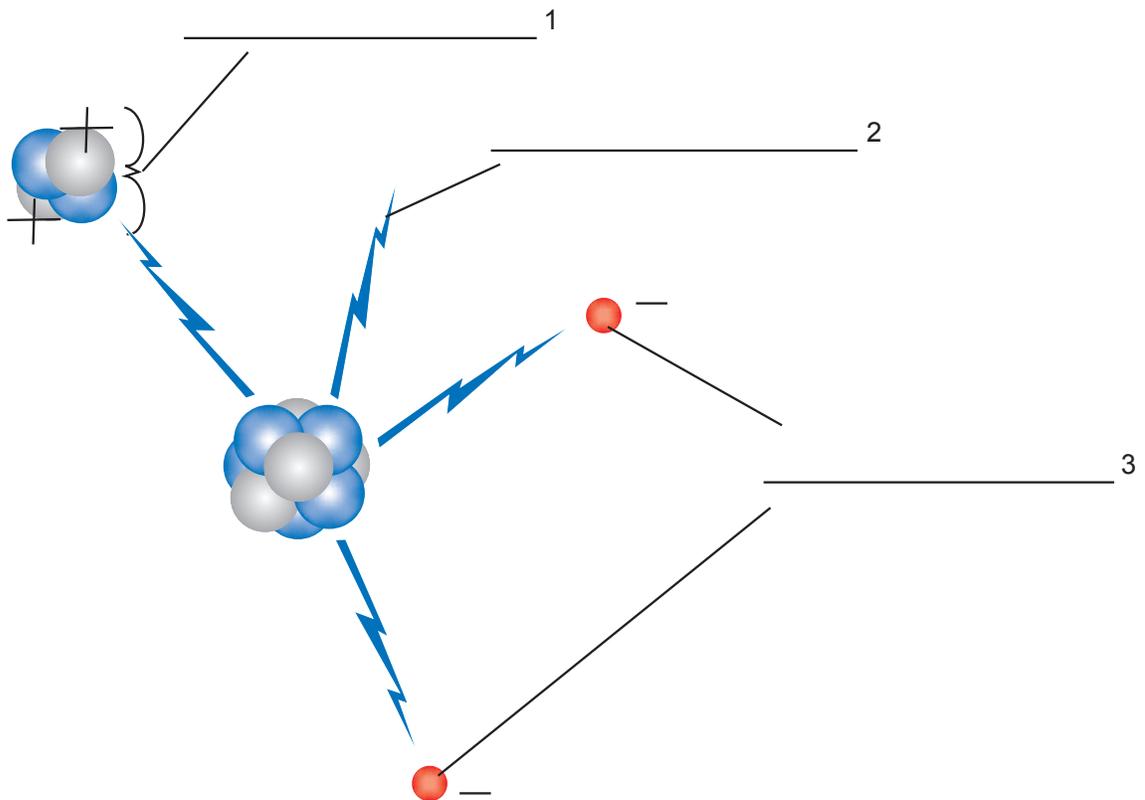


7: ATOM PARTS

Using your textbook for help, place the correct names of the parts of the atom in the blanks:

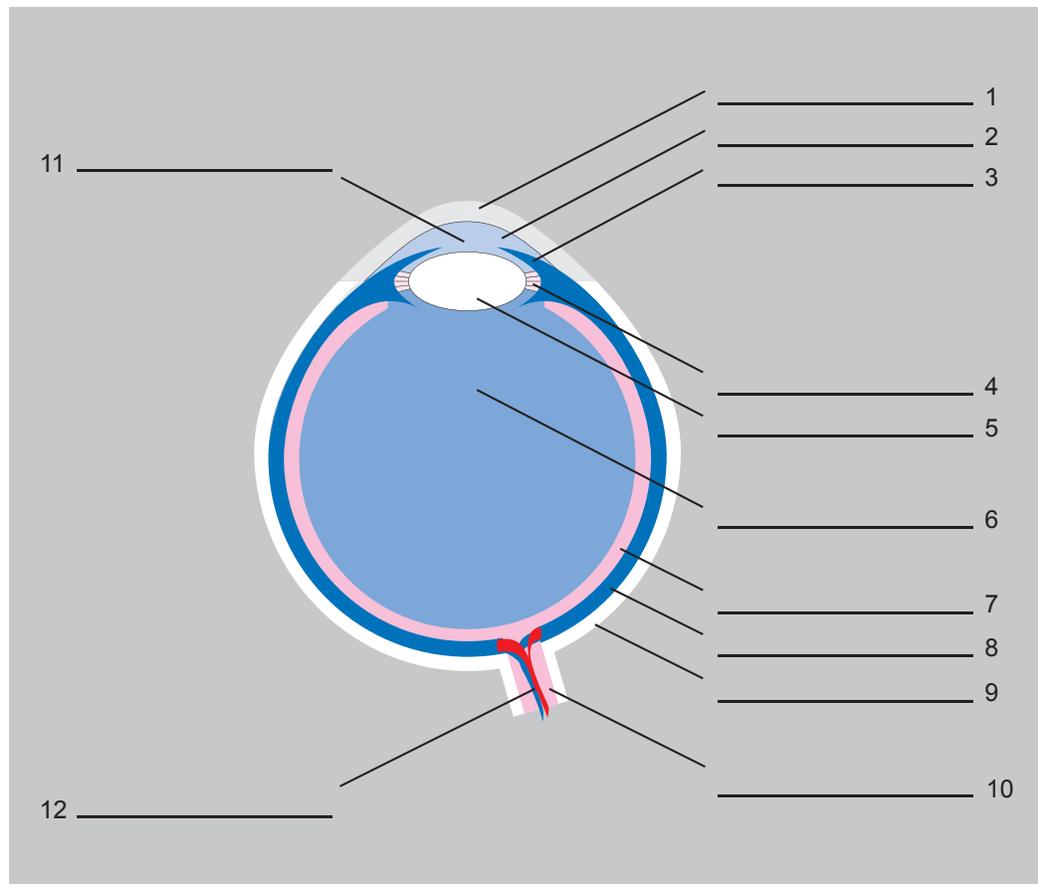
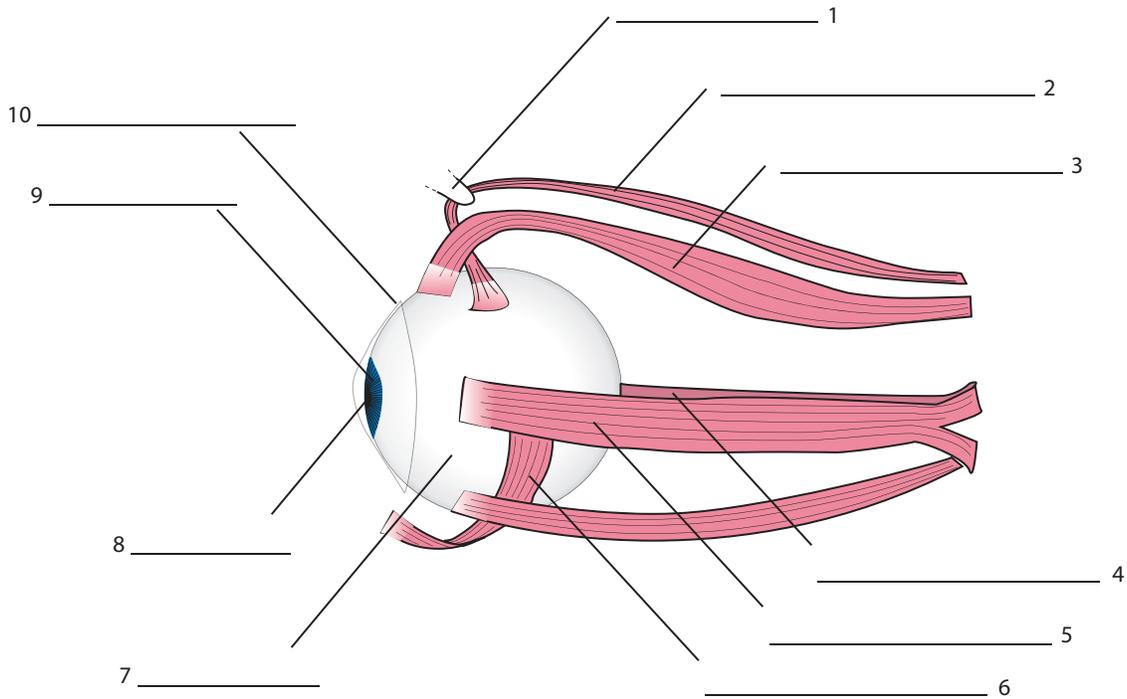


Now label this diagram of an atom undergoing radioactive decay:



27: HERE'S LOOKING AT YOU, KID

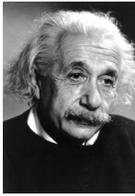
Please label all the features of the eye that were shown in the diagrams in your book.



What part am I?

1. I am part of the outer covering of the eye, like the sclera, but I am as clear as can be so light can pass through me.
2. I am a disk that bulges in the middle. Although I am made of living cells, light can pass right through me. Because I'm flexible I can bend the light to focus it on the back of the eye.
3. I am the "projector screen" of the eye. I'm the innermost layer that receives the light from the part described in number 2, above. I have cells called rods and cones that capture the light so that you can see.
4. I am the middle layer of eye tissue. The lens, the suspensory ligament and the iris are all attached to me. I have lots of blood vessels for carrying blood to the retina cells.
5. I am the watery liquid found in the eye in front of the lens.
6. I am the gel-like fluid behind the lens that keeps pressure on the inside of the eye and gives it its shape.
7. I am the tough, outer coat of the eye. Because I am white, nobody can see through me.
8. I'm not really a part, just a hole in the iris that lets light pass through. I appear black because the inside of the eye is dark, and I let people see into the inner parts of the eye.
9. I am the nerve that carries electrical signals from the eye to the brain.
10. I am the cell type that is responsible for color and detailed vision.
11. I am the cell type that is responsible for vision in low light.

8: SIR ISAAC NEWTON

- When did Sir Isaac Newton live?
 - Late 1400's and early 1500's
 - Late 1500's and early 1600's
 - Late 1600's and early 1700's
 - Late 1700's and early 1800's
- He lived at about the same time:
 - as Christopher Columbus
 - as Archimedes
 - the bubonic plague was in England
 - as the American Revolution
- He is most famous for his studies on:
 - medicine
 - natural philosophy (physics) and mathematics
 - plants
 - chemistry
- Among his most famous discoveries were that:
 - birds fly south for the winter
 - little green peas can have either wrinkled skin or smooth skin
 - powdered wigs don't look good on English noblemen
 - gravity is the force that holds the moon close to the Earth
- Circle all the following that were spoken of in the lesson among Newton's achievements:
 - progress on the mathematics called *calculus*
 - writing three laws of motion
 - discoveries about gravity
 - studies on light and optics
 - use of prisms to divide light into different colors
 - inventing first reflecting telescope
 - building mechanical toys and kites
 - inventing a famous cookie from figs
- Of which of the following written works was Newton the author?
 - Opticks* and *Principia*
 - Opticks* and *On Floating Bodies*
 - On Floating Bodies* and *Principia*
 - Principia* and *Rebecca*
- Who were some other scientists with whom Newton was acquainted?
 - Edmond Halley
 - Galileo
 - Louis Pasteur
 - Michael Jordan
 - Isaac Barrow
- Which of the following were among Newton's distinctions?
 - Master of the Mint
 - British Royal Knight
 - Running back, Miami Dolphins
 - President, British Royal Society
 - Burial in Westminster Abbey
 - Treasurer, Rotary International
- Which of the following likenesses is that of Newton?
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