

21 of 48 The speed of light is about 300,000,000 m/s. Which is the correct expression for the speed of light in scientific notation?

- A  $30.0 \times 10^7$  m/s More than 1 number in front of decimal, wrong
- B  $30.0 \times 10^8$  m/s More than 1 number in front of decimal, wrong
- C  $3.0 \times 10^7$  m/s There can be ONLY 1 number in front of the decimal. Then count the spaces you moved the decimal.
- D  $3.0 \times 10^8$  m/s

300,000,000.  
8 7 6 5 4 3 2 1

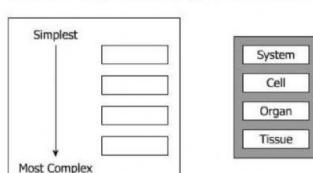
22 of 48 Which of these properties of an unknown liquid can be found using a beaker, a hot plate, and a temperature probe?

- A Density
- B Boiling point
- C Oxygen level
- D Chemical composition

You can put it in the beaker, heat it and measure the temperature.

Place the terms in the order of the simplest level of organization to the most complex.

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Start off with the biggest and the smallest. Then think about the middle 2.

24 of 48 A group of campers travels to a cabin which has no electrical power. In order to provide the power for a heater and lights, which device would be appropriate?

- A A resistor Which makes power?
- B An insulator
- C A generator
- D A voltmeter

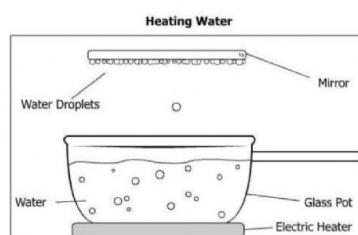
25 of 48 Which of these is most likely the result of weasels and foxes depending on the same food source? What happens if 2 predators eat the same food?

- A The populations will compete with each other.
- B One of the populations will become herbivores.
- C Birthrates for both populations will increase.
- D New species of prey will evolve in the area.

is a marsh really wet or dry?

26 of 48 A farmer wants to plant a crop that grows well in a marshland environment. In order to produce a good harvest, the most important characteristic this plant should have is the ability to —

- A thrive in wet soil
- B mature quickly
- C survive in dry conditions
- D attract a variety of pollinators



27 of 48 The volume of water in the pot decreases during this investigation. Water droplets form on the mirror when positioned over the pot. In this setup, water —

How is the water getting out of the pot and then forming water in the mirror above?

- A vaporizes and then freezes
- B vaporizes and then condenses
- C condenses and then vaporizes
- D freezes and then vaporizes

28 of 48 Which is an abiotic change in an ecosystem? Abiotic means NOT living?

- A Plant photosynthesis rates increase.
- B Fish species populations increase.
- C Aquatic predator survival rates increase.
- D Annual rainfall totals for an area increase.



How many different elements are involved in the chemical reaction shown? There is 1 Capital letter to each element symbol.

Also remember what goes in equals what comes out, so you only have to look at the elements on 1 side of the arrow!

Whenever they tell you something like this it is TRUE! Physical and chemical weathering processes are responsible for breaking down rocks. Which of these is an example of chemical weathering by water?

- A Mineral crystals form as water evaporates from rocks.
- B Limestone reacts with acid rain and dissolves.
- C Water freezes in rock cracks and causes the rock to split.
- D Moss collects and grows on the surface of rocks. Moss is not water

These 3 have water, two are physical!