AP Biology – Chapter 33 Hormonal Control of Life

READ the chapter – the answers are in the reading, charts, pictures – but mostly in the **reading**.

1. Describe Charles Darwin (yes, him!) experiments on plant shoot tips and what did he prove?
2. Describe how Boysen-Jensen extended the study and why?
3. Give a definition of a hormone using the terms receptor and signal transduction.
4. Fill in the blank: Name the responsible hormone – from the reading , NOT the chart!!

Created in meristems of apical buds - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(what are meristems of apical buds - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

Promotes mitosis - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hormone added to create seedless tomatoes - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ripening fruit - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Prolonged Cold temperatures breakdown this hormone - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hormone responsible for pea plant elongation - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Slows down growth - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sprayed on flowers to keep from aging - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Caused our corn seedlings to germinate - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ratio of \_\_\_/\_\_\_ determines if a seed remains - \_\_\_\_\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Dormant or germinates

Similar to a gaseous byproduct of kerosene production - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Describe what is being shown in the graph 33.3B

What does this tell us about hormones?

1. I trimmed my crepe myrtle tree last year. I cut the “top” shoot and some others around it. This year, my crepe myrtle looks like a short, chubby bush!!! With lots of side branches but no height!

Use your knowledge of hormones and explain what has happened.

1. Can you fit more plain grapes or Gibberellin grapes in your mouth at once?
2. How did scientists discover that plants make their own ethylene? Describe the scenario.
3. How does “one bad apple” spoil the whole bunch? It is true!!!
4. Describe the experiment in Figure 33.7A
5. Define tropism:
6. Define phototropism:
7. Define gravitropism:
8. Define thigmotropism:
9. Where does auxin go in the presence of sunlight?
10. Draw a seedling growing toward sunlight. Show the cells in the epidermis and the specific size of them that CAUSES them to bend toward your light.