**VIDEO GUIDE FOR BOZEMAN BIOLOGY – MITOSIS Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ # \_\_\_\_\_\_**

1. Name two vital life processes that require mitosis
2. What is the difference between a haploid cell and a diploid cell? What are the haploid and diploid numbers in humans?
3. Describe what happens in the three parts of interphase:
   1. G1
   2. S
   3. G2
4. What is G0?
5. A cell spends most of its time in which phase of the cell cycle? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. One side of a chromosome is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The middle of the chromosome is the \_\_\_\_\_\_\_\_\_\_. Chromosomes have a short and long \_\_\_\_\_\_\_\_\_\_\_
7. Chromosomes have two chromatids after they have passed through \_\_\_\_\_\_\_\_ phase
8. Describe what happens in:
   1. Prophase
   2. Metaphase
   3. Anaphase
   4. Telophase
   5. cytokinesis
9. How is mitosis in animal cells different from mitosis in plant cells?
10. What disease results from cells reproducing out of control?
11. How are the frequencies of smoking and lung cancer related?