Name _____ Date _____ Period _____

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# Asexual Reproduction

Biology

Show your work in the blank space. Use units and complete sentences where asked.

**1.** A bacterium divides every 30 minutes. Assume every cell keeps dividing and none die.

(a) How many cells are there after 2 hours, starting with 1 cell?

(b) How long does it take for 1 cell to become 256 cells?

**2.** Name the type of asexual reproduction in each case.

(a) A yeast cell grows a small bud that later separates from it.

(b) A bacterium copies its DNA and splits into two cells.

(c) A piece of a sponge breaks off and grows into a new sponge.

(d) A female lizard raised alone, with no males, lays eggs that hatch into young lizards.


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**3.** A hydra with the genotype Bb reproduces by budding, and no mutations occur. What is the genotype of each offspring? Explain why, using what happens to DNA before the cell divides.

**4.** Sample data (made up for practice): a farmer plants 100 potato plants grown from pieces of one potato (clones) and 100 plants grown from seeds. A disease kills 91 of the clones and 23 of the seed plants.

(a) What percent of each group died?

(b) Write a claim, evidence, reasoning statement about which group is more likely to survive a new disease, and why.

**5.** State one advantage of asexual reproduction and one advantage of sexual reproduction.


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