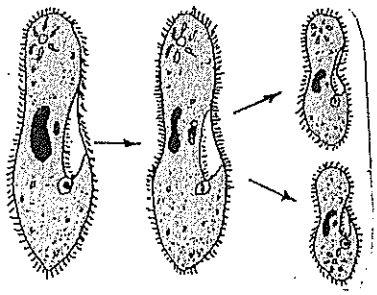
Name:_____ Date:_____

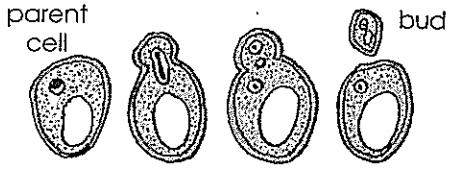
TYPES OF ASEXUAL REPRODUCTION

1. **Binary Fission**
   Equal division of the nuclear material (mitosis) and equal division of the cytoplasm. The result is two new identical organisms.

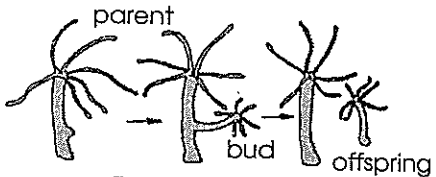


BINARY FISSION (PARAMECIUM)

2. **Budding**
   Equal division of the nuclear material (mitosis), but unequal division of the cytoplasm. In multicellular organisms, the result is a multicellular outgrowth from the parent. Eventually, the bud and parent may separate.

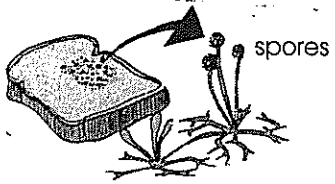


BUDDING (YEAST)



BUDDING (HYDRA)

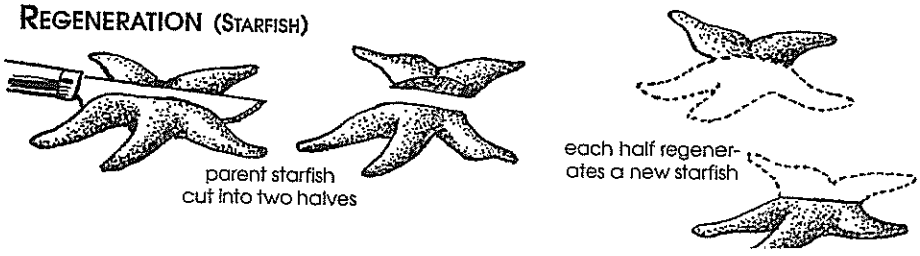
3. **Sporulation**
   In many organisms, spores, which are specialized cells formed by mitosis are released from the parent. Each spore can develop into a new individual.



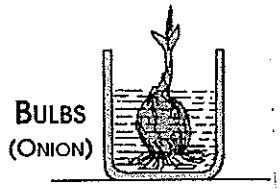
SPORULATION (BREAD MOLD)

4. **Regeneration**
   The development of an entire new organism from a part of the original organism. The cells divide by mitosis to replace the missing body parts. Regeneration also refers to the replacement of lost structures. For example, a lobster may regenerate a lost claw.

REGENERATION (STARFISH)



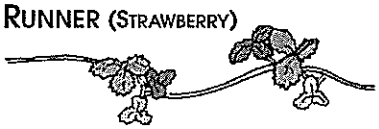
5. **Bulbs**
Underground part of a plant that contains thick fleshy leaves. The cells divide by mitosis to form a new plant.


BULBS (ONION)

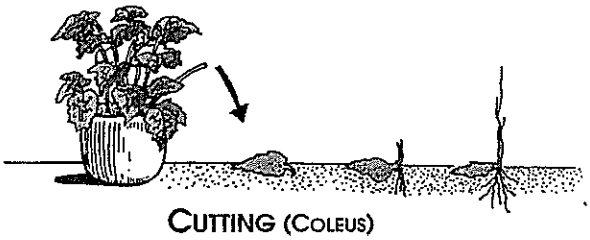
6. **Tubers**
Underground part fleshy part of plant without leaves. The cells divide by mitosis to form a new plant.


TUBERS (POTATO)

7. **Runners**
The cells of one plant divide by mitosis and extend over the ground. The newly formed stem forms new roots in the soil nearby the original plant.


RUNNER (STRAWBERRY)

8. ***Cuttings***
The leaf of a plant is cut and planted in soil. The cells of the leaf divide by mitosis to form a new plant. This can also be done using the stems of certain plants.


CUTTING (COLEUS)

PLEASE NOTE*****

5 - 8 are examples of asexual reproduction in plants. This can also be called
Vegetative Propagation

Also,
ASEXUAL REPRODUCTION = MITOSIS

No sperm, No egg, just cells dividing by mitosis !!