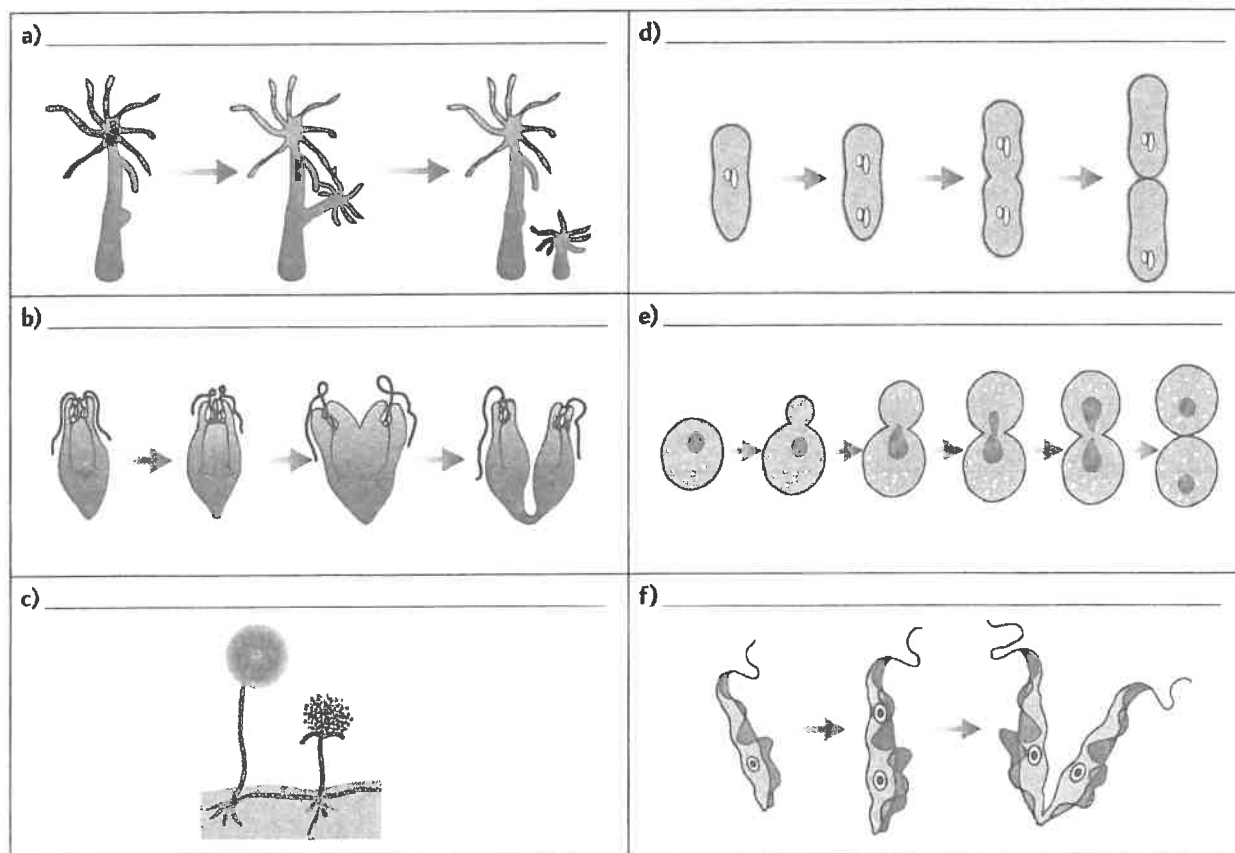


Binary Fission, Budding, and Spore Formation

Use with textbook pages 22–30.

1. Identify the type of asexual reproduction shown in each diagram.



2. Identify the type of asexual reproduction described in each scenario.

- The aquatic cell of *Planctomycetes* forms a bud, which eventually becomes a new cell that swims. _____
- A unicellular green algae, *Microsterias furcata*, divides into two equal halves forming two new cells. _____
- An amoeba grows to a certain size and then its nucleus and cytoplasm divide. This results in two amoebas. _____
- Amanita muscaria* releases spores from under its iconic red cap with white warts, producing more of these poisonous B.C. toadstools.

Use with textbook pages 166–178.

Types of asexual reproduction

Vocabulary

asexual reproduction
binary fission
budding
clone
cuttings
DNA

fragmentation
grafts
spore formation
stem cells
vegetative reproduction

Use the terms in the vocabulary box to fill in the blanks. You can use each term more than once. You will not need to use every term.

1. A _____ is an identical genetic copy of its parent.
2. In _____, only one parent is required to produce offspring.
3. _____ is a method of reproduction for some types of bacteria.
4. Some simple organisms, such as hydras and sponges, are able to reproduce asexually by _____.
5. Certain species of sea stars, corals, and mosses can reproduce asexually by _____.
6. _____ occurs when special cells in the stems and roots divide repeatedly to form structures that eventually develop into a plant identical to the parent.
7. Some bacteria can reproduce asexually when their single cells split in two, forming new individuals in a process called _____.
8. Human-assisted cloning can be used to save the _____ of an organism or mass produce an organism with a desired trait.
9. _____ are cells that have the potential to become many different types of cells.

Use with textbook pages 177-178.

True or false?

Read the statements given below. If the statement is true, write "T" on the line in front of the statement. If it is false, write "F" and then rewrite the statement to make it true.

1. _____ Asexual reproduction is the formation of a new individual that has different genetic information from its parent.

2. _____ Asexual reproduction occurs in multicellular organisms such as bacteria and in one-celled organisms such as plants.

3. _____ Sometimes humans help other organisms reproduce asexually in order to preserve the DNA of an organism.

4. _____ Sometimes humans help other organisms reproduce asexually to make large numbers of a particular type of organism that has a useful trait.

5. _____ Growing new plants from the cut ends of flowers is one way that humans make clones of plants.

6. _____ Making clones of animals involves taking the nucleus from one type of cell and putting it in the nucleus of another type of cell.
