Asexual Reproduction

Step 1: go to
http://www.biotopics.co.uk/genes1/asexual_and_sexual_reproduction.html
Read the information on the webpage and answer the following questions:

1. What are the new organisms that are a product of a single parent called?

2. Explain why the CHLOREOPHYTUM (spider plant) is a good example of asexual reproduction?

3. What 2 structures are produced when plants reproduce sexually?
   1. ______________________________________________
   2. ______________________________________________

4. How is the genetic material different after reproduction in asexual and sexual reproduction?

5. What are 2 differences between sexual and asexual reproduction?

6. What is an advantage for each sexual and asexual reproduction?
   Sexual: ___________________________________________________________________________
   Asexual: __________________________________________________________________________

7. What is a disadvantage for each sexual and asexual reproduction?
   Sexual: __________________________________________________________________________
   Asexual: __________________________________________________________________________
Step 2 Go to https://biomanbio.com/HTML5GamesandLabs/Genegames/mitosismoverpage.html to play mitosis mover and look at the cell cycle a little more closely.

1. The cell cycle occurs in order to make ____________________________

2. T / F (circle one) Interphase happens while the cell is dividing. What do cells do during interphase? ____________________________

3. What does the DNA need to do before mitosis? ____________________________

4. Making more cells is needed for g____________, r____________, and t____________ r____________.

5. The 2 genetically identical results of mitosis are referred to as ____________________________.

6. What is the correct sequence of mitosis:
   __________   __________   __________   __________

7. Why do chromosomes “condense” before division?

8. During metaphase, chromosomes move to the ____________________________.

9. What is the final stage called when there are 2 new daughter cells? ________________.

10. Daughter cells are genetically identical / different (circle one).

Step 3 Go to https://courses.lumenlearning.com/boundless-biology/chapter/reproduction-methods/ to find examples of organisms which undergo the following types of reproduction. Explain the method on the first line, and an example on the second line.

1. Asexual by binary fission
   Describe: __________________________________________________
   Example: __________________________________________________

2. Asexual by BUDDING
   Describe: __________________________________________________
   Example: __________________________________________________
3. Asexual by FRAGMENTATION
   Describe:_______________________________________________________________
   Example______________________________________________________________

4. Asexual by PARTHENOGENESIS
   Describe:_______________________________________________________________
   Example______________________________________________________________

5. SEXUAL
   Describe:_______________________________________________________________
   Example______________________________________________________________

6. Asexual by HERMAPHRODITISM
   Describe:_______________________________________________________________
   Example______________________________________________________________

Step 4 go to http://www.biology-resources.com/plants-vegetative-reproduction-01.html
To look at a few more examples of plant reproduction. Describe the method and provide an example.

1. BULBS
   Describe:_______________________________________________________________
   Example______________________________________________________________

2. RUNNERS
   Describe:_______________________________________________________________
   Example______________________________________________________________

3. CUTTINGS
   Describe:_______________________________________________________________
   Example______________________________________________________________
The diagram below represents reproduction in a yeast cell. The genes in the bud are identical to the genes in the parent.

1. This type of production of offspring is a form of
   (1) sexual reproduction
   (2) asexual reproduction
   (3) gene manipulation
   (4) genetic engineering

The diagram below represents a technique used to produce carrots.

2. Which reproductive process determines the traits present in the cluster of cells?
   (1) meiosis
   (2) fertilization
   (3) mitosis
   (4) differentiation

The diagram below represents the formation of a cancerous growth.

3. Which statement best explains the events represented in this diagram?
   (1) A gene mutation caused the cells to become muscle cells.
   (2) The growth resulted from the introduction of a vaccine.
   (3) A gene mutation caused abnormal mitotic cell division.
   (4) The growth resulted from uncontrolled meiotic cell division.

4. The paramecium is a single-celled organism that reproduces asexually. The offspring of a paramecium usually contain
   (1) only half of the genes of the parent cells
   (2) more DNA than the parent cell
   (3) genetic material identical to that of the parent cell
   (4) fewer mutations than the parent cell