c. Starfish:

Final Exam Review (1 of 3)

Name: Date: Block:

| | Biology | |
|----|---|-----------------------------|
| 1. | What does the acronym 'DNA' stand for? | |
| 2. | What is the complimentary base pair for the following strand of DNA: A C T G A T G G C G A T T A A T C G | |
| 3. | Draw and label the parts of a nucleotide. | |
| 4. | What is the role and purpose of DNA? | |
| 5. | What are the advantages of asexual reproduction? | |
| 6. | What are the disadvantages of asexual reproduction? | |
| 7. | a. Bacteria: d. | : Mold: Strawberries: |

| 8. | | e what would happen to a population that reproduces through asexual reproduction if a new disease enter into the population. |
|-----|----------|--|
| 9. | Identify | the three main stages of the cell cycle. |
| 10. | | which phase of the cell cycle each of the following statements is describing: DNA condenses into chromosomes |
| | b. | Cell grows and develops |
| | C. | Nuclear membrane reappears around the chromosomes |
| | d. | DNA is copied |
| | e. | Chromosomes line up across the middle of the cell |
| | f. | Duplicated chromosomes are pulled apart to the opposite ends of the cell |
| 11. | | diagram of the following phase in the cell cycle (interphase, mitosis, cytokinesis) : Cytokinesis |
| | b. | Prophase |
| | c. | Anaphase |

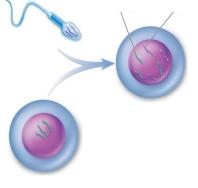
12. Determine how many chromosomes are in the gametes and body cells of the following organisms:

| Organism | Number of chromosomes in the gametes | Number of chromosomes in the body cells |
|----------|--|---|
| Dog | | 78 |
| Housefly | | 12 |
| Cow | 30 | |
| Deer | 35 | |

13. What process must cells undergo in order to produce gametes?

14. Label the following diagram with the following terms: sperm cell, egg cell, zygote, haploid, diploid, maternal

chromosome, paternal chromosome



- 15. Which stage of meiosis does each of the following statements describe?
 - a. Nuclear membrane starts to disappear and homologous chromosomes pair
 - b. DNA condenses into chromosomes
 - c. Two nuclei are formed
 - d. Chromosomes separate and move to opposite ends of the cell
 - e. Homologous chromosomes line up in two lines in the middle of the cell
 - f. DNA exists as chromosomes but not as homologous pairs
- 16. In order for chromosomes to move, they need help from structures in the cell.
 - a. Which structure helps these chromosomes move in the cell?
 - b. Where do these structures attach to on the chromosome?

| 17. What is the end result of meiosis? |
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| 18. Draw a diagram of the following phase in meiosis : a. Metaphase I |
| b. Anaphase II |
| c. Prophase I |
| d. Telophase II |
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