

Skills Worksheet

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Genetics

Work-Alikes

In the space provided, write the letter of the term or phrase that best describes how each numbered item functions.

- | | |
|-----------------------------|---|
| _____ 1. true-breeding | a. a musician who continues to play the same song |
| _____ 2. self-fertilization | b. different versions of same story |
| _____ 3. cross-pollination | c. feeding food to someone else |
| _____ 4. probability | d. predicting the outcome of a coin toss |
| _____ 5. alleles | e. feeding food to yourself |
| _____ 6. ratio | f. a baseball player's batting average |

Cause and Effect

In the space provided, write the letter of the term or phrase that best matches each cause or effect given below.

- | Cause | Effect |
|--|--|
| 7. _____ heterozygous condition | a. a defective hemoglobin |
| 8. _____ small, matures quickly, produces many offspring | b. garden pea plant for heredity studies |
| 9. P generation cross _____ | c. mutated genes |
| 10. _____ genetic disorder | d. alleles of a particular gene are different |
| 11. test cross _____ | e. wavy-haired child |
| 12. incomplete dominance _____ | f. genotype of dominant individual determined |
| 13. _____ sickle cell anemia | g. F ₁ generation |
| 14. _____ white fur in winter | h. pigment gene does not work in cold temperatures |

Linkages

In the spaces provided, write the letters of the two terms or phrases that are linked together by the term or phrase in the middle. The choices can be placed in any order. Some choices may be used more than once.

15. _____ use of mathematics _____ a. heterozygous condition
 b. recessive allele
16. _____ F₁ _____
 c. separation during meiosis
17. _____ law of independent _____ d. P assortment
 e. Mendel's experimentation
18. _____ multiply two separate _____
 probabilities f. two alleles for different traits
 g. blending of traits
19. _____ X chromosome _____ h. unknown probability of a
 genetic cross
20. _____ incomplete _____
 dominance i. sex-linked trait
 j. science of genetics
 k. known probability of genetic cross
 l. F₂

Analogies

An analogy is a relationship between two pairs of terms or phrases written as $a : b :: c : d$. The symbol $:$ is read as "is to," and the symbol $::$ is read as "as." In the space provided, write the letter of the pair of terms or phrases that best completes the analogy shown.

- _____ 21. RR : homozygous dominant ::
 a. Rr : heterozygous c. Yy : homozygous recessive
 b. rr : heterozygous d. yy : heterozygous
- _____ 22. phenotype : physical appearance ::
 a. genotype : value c. genotype : cover
 b. genotype : set of alleles d. genotype : sex linkage
- _____ 23. law of segregation : alleles for the same trait ::
 a. codominance : one trait expressed
 b. self-fertilization : cross-pollination
 c. allele pairs : law of segregation
 d. law of independent assortment : alleles for different traits
- _____ 24. sex-linked traits : on X chromosomes ::
 a. autosomes : on X chromosomes
 b. autosomes : on X-linked traits
 c. autosomal traits : on X chromosomes
 d. inherited disorders : in carriers

Sexual Reproduction and Meiosi

1. g
2. f
3. b
4. e
5. a
6. h
7. c
8. d
9. b
10. a
11. c
12. d

S

13. b
14. d
15. c
16. a
17. d, c
18. h, g
19. b, f
20. a, e
21. d
22. c
23. b
24. d

Genetics

1. a
2. e
3. c
4. d
5. b
6. f
7. d
8. b
9. g
10. c
11. f
12. e

13. a
14. h
15. j, e
16. l, d
17. c, f
18. k, h
19. i, b
20. g, a
21. a
22. b
23. d
24. d

DNA

1. d

14. c

2. c 3. e 4. b 5. a 6. e 7. d 8. a
9. b
10. c

15. j, f 16. b, h 17.
d, l 18. g, e 19. a, c
20. k, i 21. b
22. d
23. c

Protein Synthesis and Gene Expression

1. b 13. f, h
2. c 14. l, d
3. a 15. g, k
4. f 16. e, b
5. e 17. a, c
6. d 18. j, i
7. c 19. d
8. a 20. c
9. d 21. c
10. f 22. d
11. b 23. d
12. e

Genetic Technology

1. b 12. a
2. a 13. c
3. d 14. d, b
4. c 15. i, a
5. c 16. e, g
6. e 17. h, f
7. a 18. c, j
8. d 19. d
9. b 20. d
10. b 21. a
11. d 22. b

History of Life

1. g 13. f
2. f 14. k, h
3. e 15. e, b 4. c 16. i, f 5. b 17. c, a 6. d 18. j, l 7. a
19. g 8. d 20. d 9. e 21. b

10. c 22. a
11. b 23. b

11. b
12. d
13. a

24. d
25. c

12. a 24. d