

Mr. Epithelium's 2018 SSSS Heredity Test **Answer Key**

Part I

1. B
2. A
3. C
4. D
5. A
6. B
7. C
8. D

Part II

- 9a. D
- 9b. 1:2:1
- 9c. 3:1
- 10a. A

10b. We can see in Figure 1.2 that both A and B control coat color. Specifically, B can alter that expression of A, thus making the inheritance epistasis.

11a. B

11b. 1:2:1

12. Type O

	A	B
B	AA	AB
A	AB	BB

13a. $\frac{1}{4}$

13b. $\frac{1}{4}$

14a. 1:1

14b. 1:1

14c. BB, Bb, bb

		X^C	X^c
15a.	Y	X^CY	X^cY
15b. $\frac{1}{4}$			
15c. $\frac{1}{2}$		X^CX^C	X^CX^c
16a. Pleiotropy	X^c		

16b. A

17a. $\frac{11}{16}$ (use probability to easily simplify)

17b. epistasis

17c. $\frac{33}{64}$

18. B

Part III

19. C

20. Metaphase plate

21. C

22. D

23a. 1

23b. 1

24. Telophase

25. Anaphase, Prophase, Metaphase, Telophase, Interphase (in this order)

25a. Transmission electron microscope (TEM) (Go microbe!)

Part IV

26. C

27. C

28. F

29. B

30. D

31. E

32. A

33. B

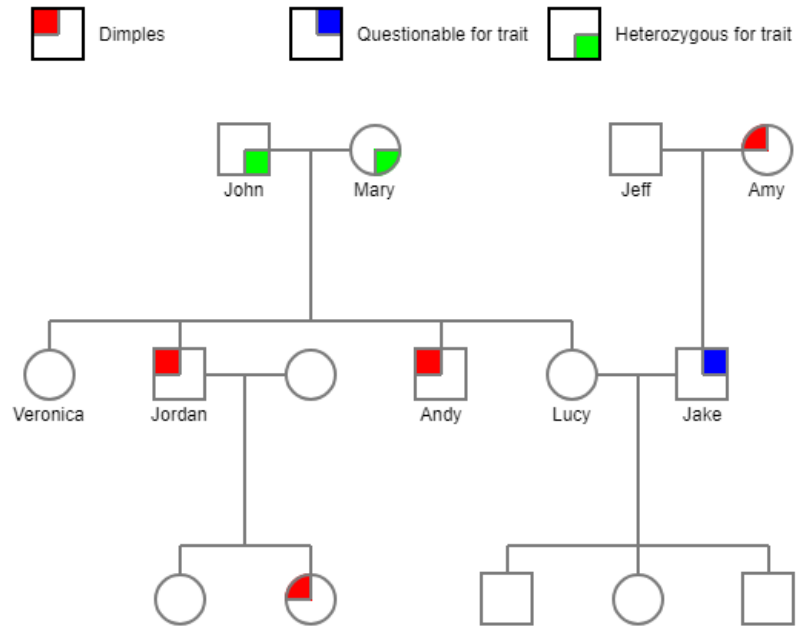
34. A

35. D

36. UUACGUAAGGCAUU

Part V

37a. (1 point for each correct person, their name, order, symbol, and location) **Note: if normal symbols were used (question mark, half-shaded for heterozygosity, etc.), still give full points**



37b. Autosomal Dominant

37c. No dimples

38a. Male

38b. Down Syndrome (accept trisomy 21)