Unit 7 Homework Answers

Homework 7.2

1. 1, 4, 7, 10, 13

2. 4, 8, 16, 32, 64

3. -1, -6, -11, -16, -21

4. $a_1 = 21$; $a_n = a_{n-1} - 7$

5. $a_1 = 3$; $a_n = 4a_{n-1}$

6. $a_1 = 4$; $a_n = -3a_{n-1}$

7. $a_1 = 1$; $a_n = a_{n-1} + 7$

8. $a_1 = 54$; $a_n = a_{n-1} - 11$

9a. $a_1 = 5000$; $a_n = .8a_{n-1} + 500$; 3524 fish

9b. The population approaches 2500 fish.

10. 3, -1, -10, -26, -51

11. 2, 5, 26, 677, 458330

12. 4, 6, 26, 666, 443546

13. 3, 7, 19, 55, 163

14. -2, -4, -14, -64, -314

15. 1, 3, -5, 27, -101

16. $a_1 = 44$; $a_n = \frac{1}{4} a_{n-1}$

17. $a_1 = 1$, $a_2 = 4$; $a_n = a_{n-1} + a_{n-2}$

18. $a_1 = 3$, $a_2 = 5$; $a_n = a_{n-1} \cdot a_{n-2}$

19. $a_1 = 2$; $a_n = 2a_{n-1} + 1$

20. $a_1 = 16$, $a_2 = 9$; $a_n = a_{n-2} - a_{n-1}$

21. $a_1 = 5$; $a_n = \sqrt{3}\, a_{n-1}$

22. $a_1 = 34$; $a_n = .6a_{n-1} + 16$; over time the amount approaches 40 ounces.

23. 2, 8, 10, 18, 22

24. 2, 4, 2, -2, -4

25. 2, 3, 6, 18, 108

26. $a_1 = 3$, $a_2 = 8$; $a_n = (a_{n-2})^2 + a_{n-1}$

27. $a_1 = 1$, $a_2 = 2$; $a_n = 4(a_{n-1} + a_{n-2})$

28. $a_1 = 2$, $a_2 = 5$; $a_n = 3a_{n-2} + a_{n-1}$