Section 3.5: Arithmetic Sequences
Practice Worksheet

Name: _____

Determine whether each sequences is an arithmetic sequence.

1. $0, 2, 5, 9, 14, \ldots$

2. $37, 34, 31, 28, \ldots$

3. $-\frac{1}{3}, -\frac{17}{6}, -\frac{16}{3}, \ldots$

Find the next three terms of each arithmetic sequence.

4. $10, 13, 16, 19, \ldots$

_____, _____, _____

5. $-14, -19, -24, \ldots$

_____, _____, _____

6. $\frac{3}{5}, \frac{7}{10}, \frac{4}{5}, \ldots$

_____, _____, _____

Use the arithmetic sequence formula to help solve each problem.

7. $3, 7, 11, 15, \ldots$

_____
38^{th} term

8. $-5, -7, -9, \ldots$

_____
71^{st} term

9. $\frac{2}{9}, \frac{5}{9}, \frac{8}{9}, \ldots$

_____
24^{th} term

10. An arithmetic sequence has a common difference of -4 and its 37^{th} term is 10. Find the first term.

11. How many total terms are there in the following sequence?

$7, 10, 13, \ldots, 391, 394$

13. A sequence has an 81^{st} term value of 6 and a 48^{th} term value of 138. What is the first term?

14. Zariah's 100 meter dash times for her first four races were 14 seconds, 13.4 seconds, 12.8 seconds, and 12.2 seconds.

i) Assuming race times will decrease at the same rate. Write an equation for the arithmetic sequence (Hint: find a_1 and d first.)

ii) What will the time for her 12^{th} race be?

⋆iii) When will she have a time of 11 seconds for the 100 meter dash?

15. Lauren opened a bank account with an initial $500. She is depositing $45.20 per week into her bank account.

i) Assuming she continues to deposit $45.20 per week. Write an equation for the arithmetic sequence (Hint: find a_1 and d first.)

ii) How much money will she have in her bank account after 15 weeks?

⋆iii) When will she have at least $2000 in her bank account?