

Lesson 4-7a Arithmetic Sequences – Recursive Formulas Homework**Determine if the sequence is arithmetic. If it is, find the common difference.**

1) 35, 32, 29, 26, ...

2) -3, -23, -43, -63, ...

3) -34, -64, -94, -124, ...

4) -30, -40, -50, -60, ...

5) -7, -9, -11, -13, ...

6) 9, 14, 19, 24, ...

Find the recursive formula for the sequences below:

QUESTION 7	QUESTION 8	QUESTION 9
26, 24, 22, 20, ...	-18, 182, 382, 582, ...	-30, -34, -38, -42, ...

Find the first 5 terms in the sequence, and then write the recursive formula

QUESTION 10	QUESTION 11	QUESTION 12
$a_1 = 28, d = 10$	$a_1 = -38, d = -100$	$a_1 = -34, d = -10$

QUESTION 13	QUESTION 14	QUESTION 15
$a_1 = 35, d = 4$	$a_1 = \frac{3}{5}, d = -\frac{1}{3}$	$a_1 = -9.2, d = 0.9$

TEST PREP: Multiple Choice

Describe the pattern in the sequence. Find the next three terms.

_____ **1** 13, 15, 17, 19, ...

A Add 2; 23, 25, 27.

C Add -2; 17, 15, 13.

B Multiply by 2; 38, 76, 152.

D Add 2; 21, 23, 25.

_____ **2** 4, 8, 16, 32, ...

A Multiply by 2; 64, 128, 256.

C Multiply by 2; 128, 256, 512.

B Multiply by -2; -64, 128, -256.

D Add 2; 34, 36, 38.

_____ **3** Write a recursive formula for the sequence 8, 10, 12, 14, 16, Then find the next term.

A $a_n = a_{n-1} + 2$, where $a_1 = 8$; 18

C $a_n = a_{n-1} - 2$, where $a_1 = 8$; 18

B $a_n = a_{n-1} + 2$, where $a_1 = 18$; 8

D $a_n = a_{n-1} - 2$, where $a_1 = 2$; -2