

Practice Quiz – 3.1,2

Arithmetic Sequences

Write a recursive and explicit equation for the following.

1. It costs \$15 to get into the carnival and \$1 for each ride.

Recursive (make sure to include a starting point) : _____

Explicit (make sure it is simplified): _____

2. 5, 9, 13, ...

Recursive (make sure to include a starting point) : _____

Explicit (make sure it is simplified): _____

3. -12, -18, -24, ...

Recursive (make sure to include a starting point) : _____

Explicit (make sure it is simplified): _____

4. -50, -40, -30, ...

Recursive (make sure to include a starting point) : _____

Explicit (make sure it is simplified): _____

5.

x	-6	-5	-4
f(x)	47	31	15

Recursive (make sure to include a starting point) : _____

Explicit (make sure it is simplified): _____

6.

x	-1	0	1
f(x)	-13	7	27

Recursive (make sure to include a starting point) : _____

Explicit (make sure it is simplified): _____

ANSWERS:

- 1. Recursive:** $f(0) = 15$ $f(x) = f(x-1) + 1$
Explicit: $f(x) = x + 15$
- 2. Recursive:** $f(1) = 5$ $f(x) = f(x-1) + 4$
Explicit: $f(x) = 4x + 1$
- 3. Recursive:** $f(1) = -12$ $f(x) = f(x-1) - 6$
Explicit: $f(x) = -6x - 6$
- 4. Recursive:** $f(1) = -50$ $f(x) = f(x-1) + 10$
Explicit: $f(x) = 10x - 60$
- 5. Recursive:** $f(-6) = 47$ $f(x) = f(x-1) - 16$
Explicit: $f(x) = -16x - 49$
- 6. Recursive:** $f(0) = 7$ $f(x) = f(x-1) + 20$
Explicit: $f(x) = 20x + 7$