

Find the first 5 terms of the sequence defined by the explicit rule $f(n) = 8n + 6$. Assume that the domain of each function is the set of whole numbers greater than 0.

Use the explicit rule and substitute the values 1 through 5 for n .

$$f(1) = 8(1) + 6 = 14$$

$$f(2) = 8(2) + 6 = 22$$

$$f(3) = 8(3) + 6 = 30$$

$$f(4) = 8(4) + 6 = 38$$

$$f(5) = 8(5) + 6 = 46$$

The first five terms are 14, 22, 30, 38, 46.

EXERCISES

3. Does $y = 6x + 5$ represent a function? Explain your answer.

(Lesson 5.2)

Yes. For every x -value there is only one y -value.

4. Given the functions $f(x) = 7x - 2$ and $g(x) = 3x + 6$, find the value of x for which $f(x) = g(x)$. (Lesson 5.2)

$x = 2$

Consider the function $y = 2x + 8$. Determine if each ordered pair is a solution. (Lesson 5.1)

5. $(1, 10)$ _____ Yes

6. $(3, 16)$ _____ No

7. $(4, 16)$ _____ Yes

8. $(5, 20)$ _____ No

Write the first four terms of the sequence. The domain of the function is the set of consecutive integers starting with 1. (Lesson 5.3)

9. $f(n) = 3n(n + 3)$ _____ 12, 30, 54, 84

10. $f(n) = 2(n + 3)$ _____ 8, 10, 12, 14

11. $f(1) = 3$ and $f(n) = f(n - 1) - 5$ _____ 3, -2, -7, -12

12. $f(1) = 4$ and $f(n) = 2 * f(n - 1) + 3$ _____ 4, 11, 25, 53