READY, SET, GO! Name Date

READY

Topic: Finding the constant difference

Find the missing terms for each <u>arithmetic</u> sequence and state the constant difference.

1. 5, 11, _____ , 23, 29, _____...

   Constant Difference = _____

2. 7, 3, -1, _____ , _____ , -13...

   Constant Difference = _____

3. 8, _____ , _____ , 47, 60...

   Constant Difference = _____

4. 0, _____ , _____ , 2, $\frac{8}{3}$ ...

   Constant Difference = _____

5. 5, _____ , _____ , _____ , 25...

   Constant Difference = _____

6. 3, _____ , _____ , _____ , -13 ...

   Constant Difference = _____

SET

Topic: Determine recursive equations

Two consecutive terms in an <u>arithmetic</u> sequence are given. Find the recursive function.

7. If $f(3) = 5$ *and* $f(4) = 8$ ...
   $f(5)$ = _____. $f(6)$ = _____. Recursive Function: _____

8. If $f(2) = 20$ *and* $f(3) = 12$ ...
   $f(4)$ = _____. $f(5)$ = _____. Recursive Function: _____

9. If $f(5) = 3.7$ *and* $f(6) = 8.7$ ...
   $f(7)$ = _____. $f(8)$ = _____. Recursive Function: _____

Two consecutive terms in a geometric sequence are given. Find the recursive function.

10. If $f(3) = 5$ *and* $f(4) = 10$ …
$f(5)$ = _____. $f(6)$ = _____. Recursive Function: _____

11. If $f(2) = 20$ *and* $f(3) = 10$ …
$f(4)$ = _____. $f(5)$ = _____. Recursive Function: _____

12. If $f(5) = 20.58$ *and* $f(6) = 2.94$ …
$f(7)$ = _____. $f(8)$ = _____. Recursive Function: _____

GO

Topic: Evaluate using function notation

Find the indicated values of $f(n)$.

13. $f(n) = 2^n$ Find $f(5)$ *and* $f(0)$.

14. $f(n) = 5^n$ Find $f(4)$ *and* $f(1)$.

15. $f(n) = (-2)^n$ Find $f(3)$ *and* $f(0)$.

16. $f(n) = -2^n$ Find $f(3)$ *and* $f(0)$.

17. In what way are the problems in #15 and #16 different?

18. $f(n) = 3 + 4(n - 1)$ Find $f(5)$ and $f(0)$.

19. $f(n) = 2(n - 1) + 6$ Find $f(1)$ and $f(6)$.