Name: _____ Date: _____

with answer

INFINITE ALGEBRA 2

Determine if the sequence is geometric. If it is, find the common ratio.

-2, -4, -8, -16,...

r = 2

-1, 1, 4, 8,...

Not geometric

1, 5, 25, -125.....

r = -5

-1, 6, 36, 216, ...

r = -6

4, 16, 36, 64,....

Not geometric

-3, 15, 75, -375....

r = 5

Evaluate each function at the given value.

$f(a) = a^3 + 3a^2 + 2a + 8$ at $a = -3$

$= -3^3 + 3(-3)^2 - 6 + 8$
$= -27 + 3(a) - 6 + 8$
$= -27 + 27 - 6 + 8$
$= -6 + 8 = 2$

$f(a) = a^4 + 3a^3 - 17a^2 + 2a - 7$ at $a = 3$

$= 81 + 3(27) - 17(a) + 6 - 7$
$= 81 + 81 - 153 - 1$
$= 162 - 154$
$= 8$

$f(x) = -x^3 + 6x - 7$ at $x = 2$

$f(2) = -(2) + 12 - 7$
$= -8 + 12 - 7$
$= 4 - 7$
$= 3$

$f(x) = x^3 + x^2 - 5x - 6$ at $x = 2$

$= 2^5 + 4 - 10 - 6$
$= 8 + 4 - 10 - 6$
$= 12 - 10 - 6$
$= 2 - 6 = -4$