Directions: For each of the following, determine if the given sequence is arithmetic, geometric, or neither.

- 1. $12, 7, 2, -3, -8, \dots$
- 2. 5, 10, 20, 40, ...

3. $20, 10, 5, \frac{5}{2}, \dots$

4. $\frac{1}{3}$, 1, $\frac{5}{3}$, $\frac{7}{3}$, 3, ...

- 5. 1, 1, 2, 3, 5, 8, 13, ...
- 6. $b_n = \frac{n+3}{2}$

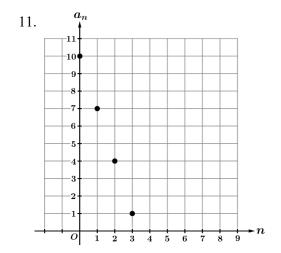
Directions: Let a_n be an arithmetic sequence with the following properties. For each of the following, find an expression for a_n , and then find a_{11} .

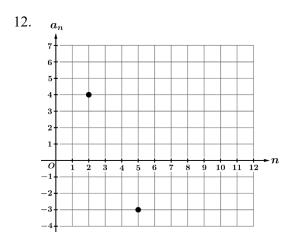
7.
$$a_3 = 7$$
 and $a_8 = 17$

8.
$$a_2 = -3$$
 and $a_6 = -9$

9.
$$a_5 = 7$$
 and $d = -4$

10.
$$a_4 = -1$$
 and $d = \frac{2}{3}$





Directions: Let g_n be a geometric sequence with the following properties. For each of the following, find an expression for g_n , and then find g_6 .

13.
$$g_1 = 5$$
 and $r = -2$

14.
$$g_2 = 8$$
 and $r = \frac{1}{2}$

15.
$$g_2 = 1$$
 and $g_5 = 27$

16.
$$g_4 = -12$$
 and $g_7 = \frac{32}{9}$

