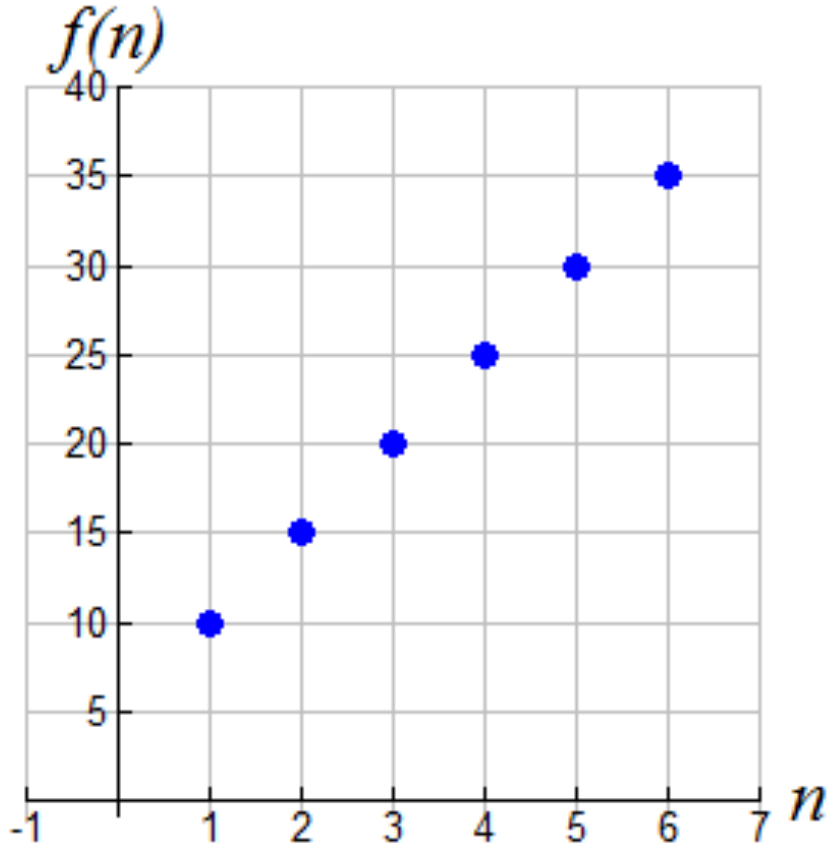
Scavenger Hunt

Arithmetic and Geometric Sequences

A

Write the formula for the following sequence.



900

B

Determine the 8^{th} term for the following sequence.

2, -8, 32, ...

$a_8 = -9.6$

C

Determine the 8th term for the following sequence.

$a_1 = 4$
$d = \frac{1}{2}$

$g_8 = -32{,}768$

D

The number of gallons of water in a 1500 gallon pool decreases by 25 gallons per hour. How much water is left after 24 hours?

<u>Hint</u>: 1500 gallons is NOT the first term. It is the initial amount (zero term). How could you find the first term?

729

E

Determine the 8^{th} term for the following sequence.

5.8, 3.6, 1.4, ...

$$g_n = 3(2)^{n-1}$$

F

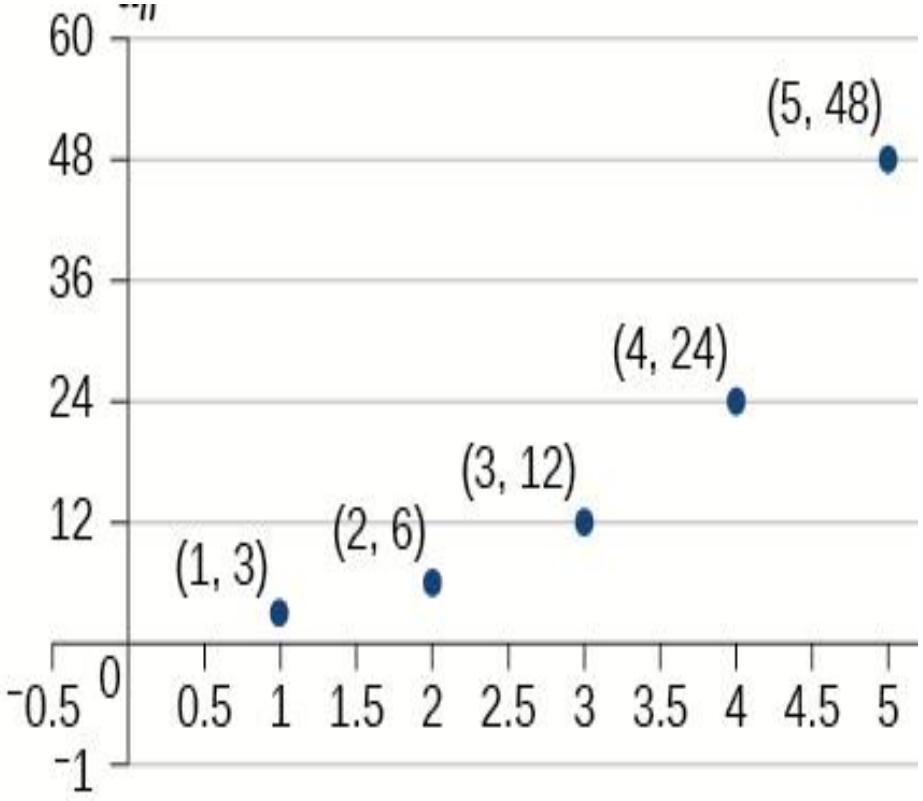
Write the formula for the following sequence.

x	y
1	2
2	6
3	18
4	54

$$a_n = 10 + 5(n - 1)$$

G

Write the formula for the following sequence.



$$a_n = 320 - 4(n - 1)$$

H

Determine the 8th term for the following sequence.

$g_1 = 4$

$r = \frac{1}{2}$

$a_8 = {}^{15}/_{2}$

I

The number of infected zombies triples every hour. How many zombies are there after 6 hours if one zombie was initially infected?

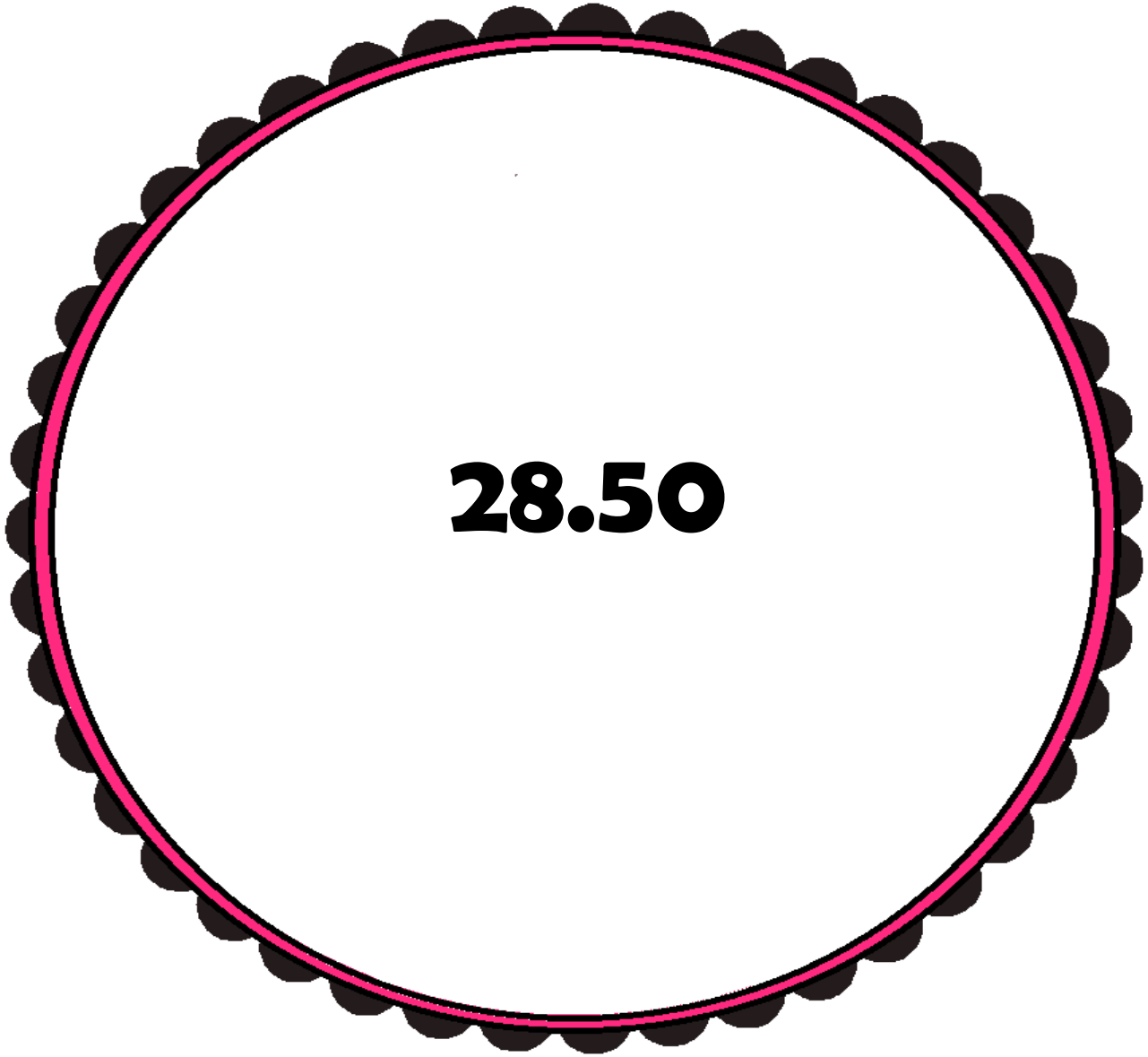
Hint: 1 zombie NOT the first term. It is the initial amount (zero term). How could you find the first term?

0.46875

K

A radioactive substance is reduced by half every hour. If there is 30 grams of the substance, how much is left after 6 hours?

<u>Hint</u>: 30 grams NOT the first term. It is the initial amount (zero term). How could you find the first term?



L

Write the formula for the following sequence.

4, 12, 36, ...

$g_n = 2(3)^{n-1}$

M

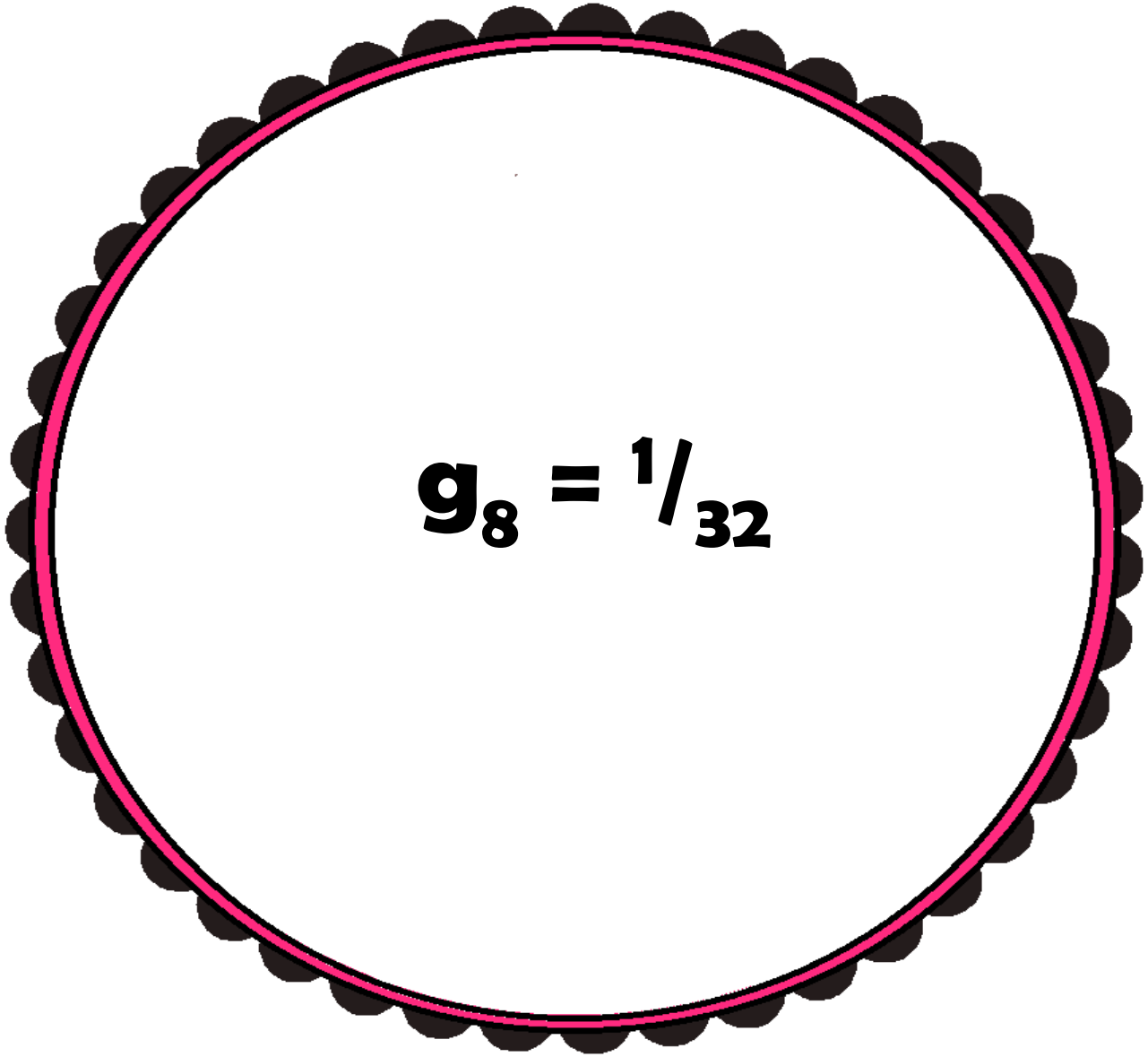
Write the formula for the following sequence.

320, 316, 312, ...

$$g_n = 320(1/4)^{n-1}$$

N

Brian gets a starting wage of $15 and an annual raise of $1.50 per hour. What will Brian's hourly wage be during his tenth year?



9

Write the formula for the following sequence.

320, 80, 20, ...

$$a_n = 4 + 3(n - 1)$$

P

Write the formula for the following sequence.

4, 7, 10, ...

$$g_n = 4(3)^{n-1}$$