

SUCESIONES

1. Escribe los cinco primeros términos de las siguientes sucesiones.

- a) $2n/(n+1)$ _____, _____, _____, _____, _____
b) $(5n-1)/3$ _____, _____, _____, _____, _____
c) $4n + 30$ _____, _____, _____, _____, _____
d) $1/(n+1)$ _____, _____, _____, _____, _____

2. Dada la progresión 6, 11, 16, 21... calcula su término a_{50} .

$a_{50} =$ _____

3. Indica si las siguientes progresiones son aritméticas o geométricas.

- a) 7, 12, 17, 22... Pr _____ . d) 96, 48, 24, 12, 6, 3... Pr _____ .
b) 1, 4, 9, 16, 25, 36... Pr _____ . e) 12, 15, 18, 21... Pr _____ .
c) 3, 6, 12, 24, 48, 96... Pr _____ . f) 1, 7, 14, 21, 28, 35... Pr _____ .

4. Das las siguientes progresiones aritméticas, calcula su diferencia, la expresión de su término general, el término vigésimo y la suma de los primeros 30 términos.

- a) -3, -1, 1, 3...
d = _____ $a_n =$ _____ $a_{20} =$ _____ $S_{30} =$ _____
b) 7, 8, 9, 10...
d = _____ $a_n =$ _____ $a_{20} =$ _____ $S_{30} =$ _____
c) 5, 9, 13, 17...
d = _____ $a_n =$ _____ $a_{20} =$ _____ $S_{30} =$ _____
d) 2, 5, 8, 11...
d = _____ $a_n =$ _____ $a_{20} =$ _____ $S_{30} =$ _____
e) 8, 11, 14, 17...
d = _____ $a_n =$ _____ $a_{20} =$ _____ $S_{30} =$ _____
f) 0, 3, 6, 9, 12...
d = _____ $a_n =$ _____ $a_{20} =$ _____ $S_{30} =$ _____
g) 2, 6, 10, 14, 18...
d = _____ $a_n =$ _____ $a_{20} =$ _____ $S_{30} =$ _____
h) 5, 11, 17, 23, 29...
d = _____ $a_n =$ _____ $a_{20} =$ _____ $S_{30} =$ _____

5. De las siguientes progresiones geométricas, calcula la razón de cada una de ellas, el término general, el término 15, la suma de los primeros 20 términos, y la suma de sus infinitos términos.

a) 2, 6, 18, 54...

$$r = \underline{\hspace{1cm}} \quad a_n = \underline{\hspace{1cm}} \quad a_{15} = \underline{\hspace{1cm}} \quad S_{20} = \underline{\hspace{1cm}} \quad S_{\infty} = \underline{\hspace{1cm}}$$

b) $\frac{2}{3}, \frac{1}{2}, \frac{3}{8}, \frac{9}{32}, \dots$

$$r = \underline{\hspace{1cm}} \quad a_n = \underline{\hspace{1cm}} \quad a_{15} = \underline{\hspace{1cm}} \quad S_{20} = \underline{\hspace{1cm}} \quad S_{\infty} = \underline{\hspace{1cm}}$$

c) 4, 12, 36, 108...

$$r = \underline{\hspace{1cm}} \quad a_n = \underline{\hspace{1cm}} \quad a_{15} = \underline{\hspace{1cm}} \quad S_{20} = \underline{\hspace{1cm}} \quad S_{\infty} = \underline{\hspace{1cm}}$$

d) 3, 15, 75, 375, 1.875...

$$r = \underline{\hspace{1cm}} \quad a_n = \underline{\hspace{1cm}} \quad a_{15} = \underline{\hspace{1cm}} \quad S_{20} = \underline{\hspace{1cm}} \quad S_{\infty} = \underline{\hspace{1cm}}$$

e) $7, \frac{7}{2}, \frac{7}{4}, \frac{7}{8}, \dots$

$$r = \underline{\hspace{1cm}} \quad a_n = \underline{\hspace{1cm}} \quad a_{15} = \underline{\hspace{1cm}} \quad S_{20} = \underline{\hspace{1cm}} \quad S_{\infty} = \underline{\hspace{1cm}}$$

f) 5, 15, 45, 135, 405...

$$r = \underline{\hspace{1cm}} \quad a_n = \underline{\hspace{1cm}} \quad a_{15} = \underline{\hspace{1cm}} \quad S_{20} = \underline{\hspace{1cm}} \quad S_{\infty} = \underline{\hspace{1cm}}$$

g) 2, 8, 32, 128...

$$r = \underline{\hspace{1cm}} \quad a_n = \underline{\hspace{1cm}} \quad a_{15} = \underline{\hspace{1cm}} \quad S_{20} = \underline{\hspace{1cm}} \quad S_{\infty} = \underline{\hspace{1cm}}$$

h) 2, -4, 8, -16, 32, -64, 128...

$$r = \underline{\hspace{1cm}} \quad a_n = \underline{\hspace{1cm}} \quad a_{15} = \underline{\hspace{1cm}} \quad S_{20} = \underline{\hspace{1cm}} \quad S_{\infty} = \underline{\hspace{1cm}}$$