① $b_1 = 0,25$

$b_2 = 0,25 \cdot 4 = 1$

$b_3 = 1 \cdot 4 = 4$

$b_4 = 4 \cdot 4 = 16$

$b_5 = 16 \cdot 4 = 64$

$b_6 = 64 \cdot 4 = 256$

RESPUESTA (B)

② $a_n = a_{k+1} = a_k + 4$

$a_n = a_2 = a_1 + 4$

$a_n = a_3 = a_2 + 4 \ldots$

$a_n = 25, 29, 33, 37, 41 \ldots$

③ $a_1 = +\frac{2}{3}, \quad a_{k+1} - a_k - \frac{1}{2}$

$\frac{2}{3} + a_2 - a_2 - \frac{1}{2} = \frac{1}{6}$

$\frac{1}{6} + a_3 - a_3 - \frac{1}{2} = \frac{1}{3}$

$-\frac{1}{3} + a_3 - a_3 - \frac{1}{2} = -\frac{5}{6}$

$$-\frac{5}{6} + a_5 - a_5 - \frac{1}{2} = -\frac{4}{3}$$

RESPUESTA (D)

(4) $a_1 = 4, \quad r = 3$

$4 \cdot 3^{n-1}$

$n = 1$

razon

3

RESPUESTA (C)

⑤ $\sum_{n=1}^{9} \frac{3n-1}{n}$

$\frac{3 \times 1 - 1}{1} = \frac{3 - 1}{1} = \frac{2}{1} = 2$

$\frac{3 \times 2 - 1}{2} = \frac{6 - 1}{2} = \frac{5}{2} = 2,5$

$\frac{3 \times 3 - 1}{3} = \frac{9 - 1}{3} = \frac{8}{3} = 2,6$

$\frac{3 \times 4 - 1}{4} = \frac{12 - 1}{4} = \frac{11}{4} = 2,75$

$\frac{3 \times 5 - 1}{5} = \frac{15 - 1}{5} \quad \frac{14}{5} = 2,8$

$\frac{3 \times 6 - 1}{6} = \frac{18 - 1}{6} = \frac{17}{6} = 2,83$

$$\frac{3 \times 7 - 1}{7} = \frac{21 - 1}{7} \quad \frac{20}{7} = 2,857142$$

$$\frac{3 \times 8 - 1}{8} = \frac{24 - 1}{8} = \frac{23}{8} = 2,875$$

$$\frac{3 \times 9 - 1}{9} = \frac{27 - 1}{9} = \frac{26}{9} = 2,8$$

$$\frac{2}{1} + \frac{5}{2} + \frac{8}{3} + \frac{11}{4} + \frac{14}{5} + \frac{17}{6} + \frac{20}{7} + \frac{23}{8} + \frac{26}{9} = \frac{60911}{2520}$$

Respuesta (A)

(6)

$$\sum_{n=1}^{6} \frac{1}{2n}$$

$$\frac{1}{2 \times 1} = \frac{1}{2} = 0,5$$

$$\frac{1}{2 \times 2} = \frac{1}{4} = 0,25$$

$$\frac{1}{2\times 3} = \frac{1}{6} = 0{,}16$$

$$\frac{1}{2\times 4} = \frac{1}{8} = 0{,}125$$

$$\frac{1}{2\times 5} = \frac{1}{10} = 0{,}1$$

$$\frac{1}{2\times 6} = \frac{1}{12} = 0{,}083$$

$$0{,}5 + 0{,}25 + 0{,}16 + 0{,}125 + 0{,}1 + 0{,}083 = 1{,}218$$

$$\downarrow$$

$$1{,}22$$

Respuesta (D)

(7) $$\sum_{n=1}^{5} \left(\frac{2}{7}\right)^{n-1}$$

$$1 + \frac{2}{7} + \frac{4}{49} + \frac{8}{343} + \frac{16}{2401} = \frac{3355}{2401}$$

RESPUESTA (A)

$$\begin{array}{r} 6950050 \\ -\ 5'150.050 \\ \hline 1'800.000 \end{array}$$

RESPUESTA (D)

D) $S_n = \frac{4(4^n - 1)}{4-1} = 5,461$

$S_1 = \frac{1(4^1 - 1)}{4-1} = 1$

$S_2 = \frac{1(4^2 - 1)}{4-1} = 5,3$

$S_3 = \frac{1(4^3 - 1)}{4-1} = 21$

$S_4 = \frac{1(4^4 - 1)}{4-1} = 85$

$S_5 = \frac{1(4^5 - 1)}{4-1} = 341$

$S_6 = \frac{1(4^6 - 1)}{4-1} = 1,365$

$S_7 = \frac{1(4^7 - 1)}{4-1} = 5,461$

Respuesta (A)