Scribe 10/11/21

Evidencias Examen

1. $1 = 0,25$

$2 = 0,25 \cdot 4 = 1$

$3 = 4 \cdot 1 = 4$

$4 = 4 \cdot 4 = 16$

$5 = 10 \cdot 4 = 64$

$6 = 64 \cdot 4 = 256$

2. $an = ak + 1 = ak + 4$

$an = a_2 = a_1 + 4$

$an = a_3 = a_2 + 4$

$an = 25, 29, 33, 37, 41$

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

$\frac{1}{6} + a_3 - a_3 - \frac{1}{2} = -\frac{1}{3}$ $\left(\frac{2}{3}, \frac{1}{6}, -\frac{1}{3}, -\frac{5}{6}, -\frac{4}{3}\right)$

$-\frac{1}{3} + a_4 - a_4 - \frac{1}{2} = -\frac{5}{6}$

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

4. $a_1 = 4, 4 = 3$

$a \cdot Rn - 1$

$a_1 = a \cdot s^{n-1}$

$a_1 = 12^{1-1} = 12$

$a_2 = 4, 4^{1-2} = 1$

$a_2 = 12^{-1}$

$a_2 = 12$

5. $\frac{3\times1-1}{1}=\frac{3-1}{1}=\frac{2}{1}$

$\frac{3\times2-1}{2}=\frac{6-1}{2}=\frac{5}{2}$

$\frac{3\times3-1}{3}=\frac{9-1}{3}=\frac{8}{3}$

$\frac{3\times4-1}{4}=\frac{12-1}{4}=\frac{11}{4}$

$\frac{3\times5-1}{5}=\frac{15-1}{5}=\frac{14}{5}$

$\frac{3\times6-1}{6}=\frac{18-1}{6}=\frac{17}{6}$

$\frac{3\times7-1}{7}=\frac{21-1}{7}=\frac{20}{7}$

$\frac{3\times8-1}{8}=\frac{24-1}{8}=\frac{23}{8}$

$\frac{3\times9-1}{9}=\frac{27-1}{9}=\frac{26}{9}$

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

$\frac{60911}{2520}$

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

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

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

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

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

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

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

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

$1{,}22$

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

$Sn = a_1 \times \frac{1 - r5}{1 - r}$

$S_5 = 1 \times \frac{1 - \left(\frac{2}{7}\right)^5}{1 - \frac{2}{7}}$

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

$\frac{7 - 7 \times \left(\frac{2}{7}\right)^5}{5} = \frac{7 - 7 \times \frac{25}{75}}{5} = \frac{7 - \frac{25}{74}}{5} = \frac{7\frac{32}{74}}{5} =$

$\frac{75 - 32}{\frac{74}{5}}$

$$\frac{7^5-32}{5\times74} = \frac{16807-32}{5\times74} = \frac{16775}{5\times74} = \frac{3355}{74} = \frac{3355}{2401}$$

8. 6.950.050
5.150.050
1.800.000

9.
$$Sn = \frac{a(4^n-1)}{4-1} = 5.461$$

$$S1 = \frac{1(4^1-1)}{4-1} = 1$$

$$S2 = \frac{1(4^2-1)}{4-1} = 2,3$$

$$S3 = \frac{1(4^3-1)}{4-1} = 21$$

$$S4 = \frac{1(4^4-1)}{4-1} = 85$$

$$S5 = \frac{1(4^5-1)}{4-1} = 347$$

$$S6 = \frac{1(4^6-1)}{4-1} = 1.365$$

$$S7 = \frac{1(4^7-1)}{4-1} = 5.461$$