FISA 2 SERII DE NUMERE REALE

EXERCITIUL 1. Să se studieze natura următoareleor seri de numere reale:

a)
$$\sum_{n>0} \frac{1}{\sqrt[3]{n} + \sqrt[3]{n+1}}$$

b)
$$\sum_{n\geq 1}^{n\geq 0} \frac{na^n}{n+1}$$
, unde $a\in \mathbb{R}$

c)
$$\sum_{n>0}^{n\geq 1} 2^n \sin \frac{\pi}{5^n}$$

d)
$$\sum_{n>0}^{n \ge 0} \left(\sqrt{n^4 + 2n + 1} - n^2 \right)$$

e)
$$\sum_{n\geq 1}^{n} \frac{a^n}{n}$$
, unde $a\in \mathbb{R}$

f)
$$\sum_{n>1}^{n \ge 1} \frac{a^n}{\sqrt[n]{n!}}$$
, unde $a > 0$

EXERCITIUL 1. Să se studieze a)
$$\sum_{n\geq 0} \frac{1}{\sqrt[3]{n+\sqrt[3]{n+1}}}$$
 b)
$$\sum_{n\geq 1} \frac{na^n}{n+1}, \text{ unde } a \in \mathbb{R}$$
 c)
$$\sum_{n\geq 0} 2^n \sin \frac{\pi}{5^n}$$
 d)
$$\sum_{n\geq 0} \left(\sqrt{n^4+2n+1}-n^2\right)$$
 e)
$$\sum_{n\geq 1} \frac{a^n}{n}, \text{ unde } a \in \mathbb{R}$$
 f)
$$\sum_{n\geq 1} \frac{a^n}{\sqrt[3]{n}}, \text{ unde } a>0$$
 h)
$$\sum_{n\geq 1} \frac{a^n}{(3+\sqrt{1})(3+\sqrt{2})\cdots(3+\sqrt{n})}$$
 i)
$$\sum_{n\geq 1} \frac{1}{n^\alpha \ln n}, \text{ unde } \alpha>0$$
 j)
$$\sum_{n\geq 0} \frac{(-1)^n}{\sqrt{n+\sqrt{2n+1}}}$$
 k)
$$\sum_{n\geq 1} \frac{\sin n}{n}$$
 l)
$$\sum_{n\geq 1} \frac{\sin \frac{1}{n} \sin n}{n}$$
 m)
$$\sum_{n\geq 0} \frac{\sqrt{n}}{n^2+4n+6}$$
 n)
$$\sum_{n\geq 0} a^{-n^2}, \text{ unde } a>0$$
 o)
$$\sum_{n\geq 1} \frac{a^n}{\sqrt{n!}}, \text{ unde } a>0$$
.

i)
$$\sum_{n\geq 2}^{\infty} \frac{1}{n^{\alpha} \ln n}$$
, unde $\alpha > 0$

$$j) \sum_{n\geq 0}^{-} \frac{(-1)^n}{\sqrt{n} + \sqrt{2n+1}}$$

$$\mathbf{k}) \sum_{n\geq 1}^{-1} \frac{\sin n}{n}$$

$$1) \sum_{n>1}^{-} \frac{\sin \frac{1}{n} \sin n}{n}$$

m)
$$\sum_{n>0}^{\infty} \frac{\sqrt{n}}{n^2+4n+6}$$

n)
$$\sum_{n\geq 0}^{n\geq 0} a^{-n^2}$$
, unde $a>0$

o)
$$\sum_{n\geq 1}^{n\geq 0} \frac{a^n}{\sqrt{n!}}$$
, unde $a>0$.