

סכומים אינסופיים

$$1 + \frac{2}{2} + \frac{3}{4} + \frac{4}{8} + \frac{5}{16} + \frac{6}{32} + \dots = ? \quad \text{א.} \quad .1$$

$$1 + \frac{4}{2} + \frac{9}{4} + \frac{16}{8} + \frac{25}{16} + \frac{36}{32} + \dots = ? \quad \text{ב.}$$

$$1 - \frac{3}{4} + \frac{1}{9} - \frac{3}{16} + \frac{1}{25} - \frac{3}{36} + \dots = ? \quad \text{א.} \quad .2$$

$$\frac{1}{2^3} + \frac{1}{4^3} + \frac{1}{6^3} + \frac{1}{8^3} + \frac{1}{10^3} + \dots}{\frac{1}{1^3} + \frac{1}{3^3} + \frac{1}{5^3} + \frac{1}{7^3} + \frac{1}{9^3} + \dots} = ? \quad \text{ב.}$$

$$1 + \frac{1}{2} - \frac{2}{3} + \frac{1}{4} + \frac{1}{5} - \frac{2}{6} + \frac{1}{7} + \frac{1}{8} - \frac{2}{9} + \dots = ? \quad .3$$

$$\sum_{n=1}^{\infty} \arctan\left(\frac{1}{2 \cdot n^2}\right) = ? \quad .4$$

$$\frac{1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \frac{1}{5} - \frac{1}{6} + \frac{1}{7} - \frac{1}{8} + \frac{1}{9} - \frac{1}{10} + \dots}{1 + \frac{1}{3} - \frac{1}{2} + \frac{1}{5} + \frac{1}{7} - \frac{1}{4} + \frac{1}{9} + \frac{1}{11} - \frac{1}{6} + \dots} = ? \quad .5$$

$$\sum_{n=1}^{\infty} \ln\left(1 + \frac{1}{n}\right) \cdot \ln\left(1 + \frac{1}{2n}\right) \cdot \ln\left(1 + \frac{1}{2n+1}\right) = ? \quad .6$$

בתאבון!