

FIND THE LIMIT OF THE SEQUENCES:

$$1). a_n = \frac{4-2n}{2+4n}$$

$$2). a_n = 9 + (-1)^n \cdot 4$$

$$3). a_n = \frac{\ln\left(1 - \frac{2}{n}\right)}{\sin\left(\frac{6}{n}\right)}$$

$$4). a_n = \frac{4 \cos(n^5)}{\sqrt{n}}$$

$$5). a_n = \left(\frac{1}{9}\right)^n + \frac{1}{\sqrt{5}^n}$$

$$6). a_n = \ln(n^2+1) - \ln(3n^2-n+1)$$

$$7). a_n = \ln(n^2+1) - \ln(n+1)$$

$$8). a_n = \ln(n^2+n+1) - \frac{1}{2} \ln(3n^4+n^3)$$