$$\frac{1}{a_n} = (6 + 6n)^{-7}$$

$$\lim_{N\to\infty} N^{k} ((G + (G N))^{-7} = N^{k} \times -7$$
(G+(GN))<sup>7</sup>

$$(c + (en)^7)$$

as 
$$n \rightarrow \infty$$
,  $\frac{n^7}{(let len)^7} \approx \frac{n^7}{len^7} = \frac{1}{len}$ 

$$B = a_n = \frac{7}{n^2 + n}$$

$$\lim_{N\to\infty} n^{k} \cdot \frac{7}{n^{2}+n} \approx \frac{7n^{k}}{n^{2}}, \quad k=2 \Rightarrow \frac{7n^{k}}{\sqrt{n^{2}}}$$

$$C. \quad a_n = \frac{4n^2 + 7n + 4}{8n^7 + 2n + 6}$$

$$\frac{\lim_{N\to\infty} n^{k} \cdot 4n^{2} + 7n + 4}{8n^{7} + 2n + 6} \times \frac{n^{k} \cdot 4n^{2}}{8n^{7}},$$

$$\frac{|k|}{8n^{7}} = \frac{1}{2}$$

D. an = 
$$\left(\frac{4n^2 + 7n + 6}{8n^7 + 2n + 6\sqrt{1n}}\right)$$

$$An = \frac{1}{n}$$

$$B_{N} = \frac{1}{N^{5}}$$

$$1. \sum_{N=1}^{\infty} \frac{8n^2 + 3n^6}{5n^7 + 9n^3 - 5} = an$$

L: 
$$\lim_{n \to \infty} \frac{3}{\frac{5n}{1}} = \frac{3}{5} \cdot \sqrt{1} = \frac{3}{5}$$

$$\frac{2}{5} = \frac{5}{935} + \frac{17}{4905} + \frac{18}{8}$$

$$a_n \approx \frac{n^2}{935n^2} = \frac{1}{935n^5}$$

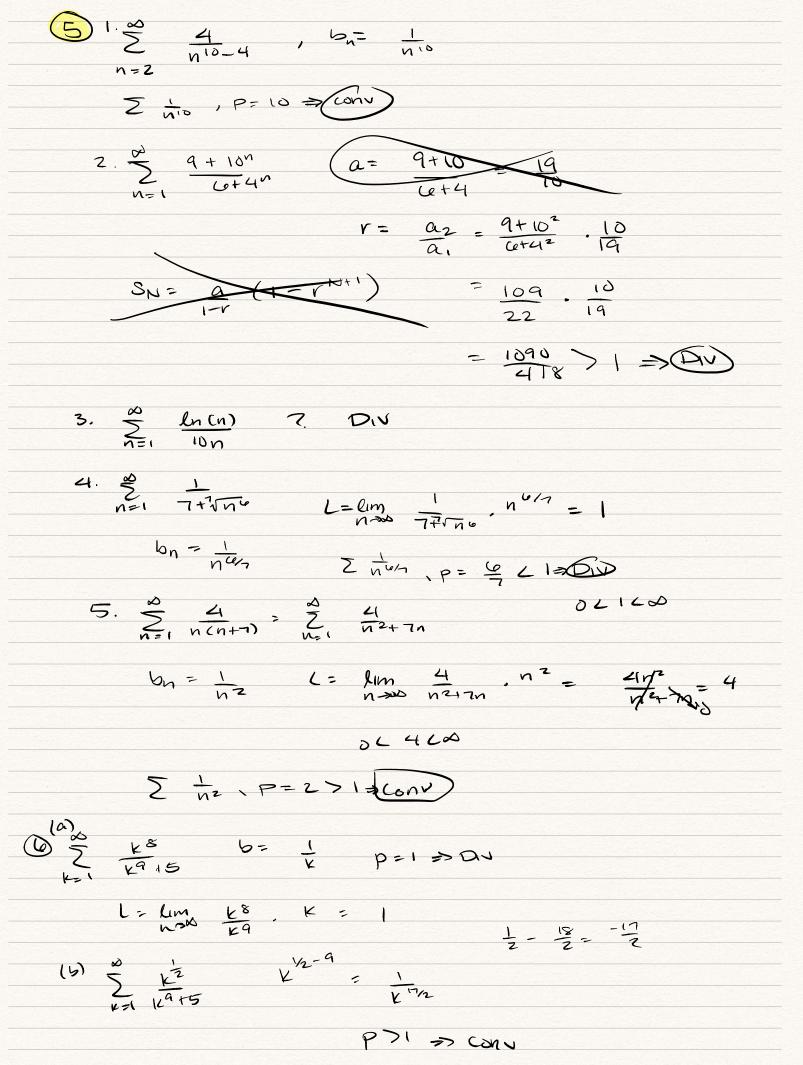
$$b_n = \frac{1}{n^5}$$

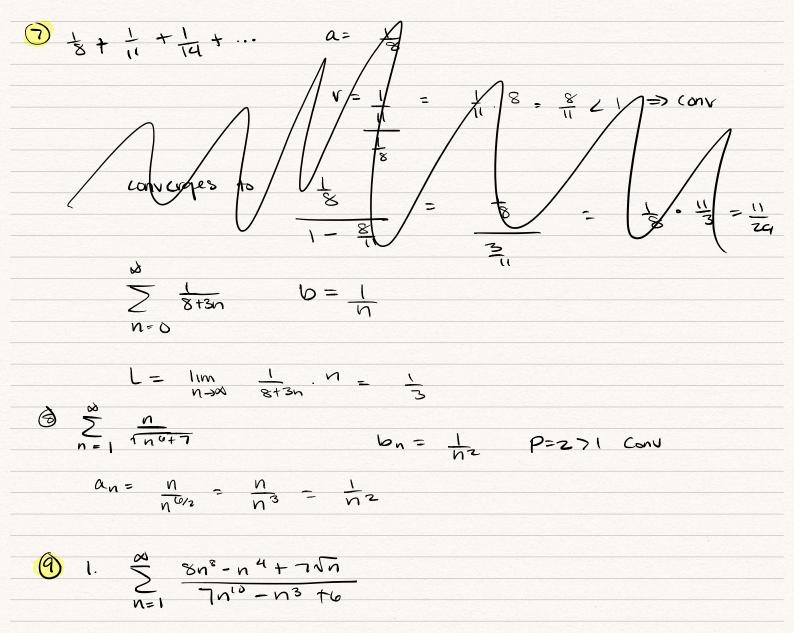
$$5 \frac{5n^3 - 9n^2 + 6}{3 + 3n^4}$$

(a) 
$$a_{1} \approx \frac{5n^{3}}{3n^{4}} = \frac{5}{3n}$$

$$\lim_{n\to 0} \frac{a_n}{b_n} = \frac{5n^3 - 9n^2 + 6}{3t3n^4} \cdot \frac{n}{1} = \frac{5n^4 - 9n^3 + 6n}{3t3n^4}$$

(b) 
$$\lim_{N\to\infty} \frac{a_N}{y_N} = \frac{5n^4}{3n^4} = \frac{5}{3}$$





an 
$$\frac{8n^8}{7n^6} = \frac{8}{7n^2}$$

$$\frac{8n^8}{7n^6} = \frac{8}{7n^2}$$

$$\frac{1}{5n^2}$$

$$\sum_{n=1}^{\infty} \frac{1}{n^{2}}, p=271 \Rightarrow conv$$

$$2. \sum_{n=1}^{\infty} \frac{cos^{2}(n)\sqrt{n}}{n^{3}}$$

$$a_n \approx \sqrt{n} - n^{1/2-3} = n^{-\frac{5}{2}}$$

bn = 1 5/2

3. 
$$\frac{\infty}{2} \frac{(\ln(n))^4}{n+8} \Rightarrow \text{Div because } (\ln(n))^4 \Rightarrow n$$

an 
$$\approx \frac{n^{1/2}}{7n} = \frac{1}{7\pi n}$$

$$5. \sum_{n=1}^{\infty} \frac{7n^3}{n^4 + 7}$$

$$a_{n} \approx \frac{7n^{3}}{n^{n}} = \frac{7}{n}$$

$$\sum_{n=1}^{\infty} \frac{1}{n} > p = 1 \Rightarrow \boxed{DN}$$

$$b_n = 1$$

$$a = \frac{9}{11}$$

(10) 
$$\frac{9}{5+6^{\circ}}$$
  $a = \frac{9}{11}$   $r = \frac{0}{a_1} = \frac{9}{5+36} = \frac{11}{9}$