Date	Contents	Assignments Due Date
Apr. 2	Course intro, §5.1	HW §5.1-§5.3. Due Apr. 13
Apr. 4	§5.2	
Apr. 5	(D) HW §5.1-§5.2	
Apr. 6	§5.3-§5.4	
Apr. 9	§5.4-§5.5	HW §5.4-§5.5. Due Apr. 20
Apr. 11	§5.5	
Apr. 12	(D) HW §5.3-§5.5	
Apr. 13	§5.5	
Apr. 16	§6.1	HW §6.1-§6.2. Due Apr. 27
Apr. 18	§6.1	
Apr. 19	(D) Quiz #1 (§5.1-§5.5)	
Apr. 20	§6.2	
Apr. 23	§6.2	
Apr. 25	§6.2	
Apr. 26	(D) HW §6.1-§6.2	
Apr. 27	§6.2-§7.1	
Apr. 30	§7.1-§7.2	HW §7.1-§7.3 Due May 11
May 2	§7.2-§7.3	
May 3	(D) Review for Midterm	
May 4	Midterm	
May 7	§7.3	HW §7.4-§7.6. Due May 18
May 9	§7.4	
May 10	(D) HW §7.1-§7.4	
May 11	§7.4-§7.5	
May 14	§7.6	HW §8.1-§8.2. Due May 25
May 16	§8.1	
May 17	(D) HW Quiz #2 (§7.1-§7.6)	
May 18	§8.1	
May 21	§8.2	
May 23	§8.2	
May 24	(D) HW §7.5-§7.6, §8.1-§8.2	
May 25	§8.2	
May 28	*Holiday*	HW §8.3-§8.4. Due Jun. 8
May 30	§8.3	
May 31	(D) HW §8.2-§8.3	
Jun. 1	§8.3	
Jun. 4	§8.4	
Jun. 6	§8.4	
Jun. 7	(D) Review for the final	
Jun. 8	§8.4	

First note that $\sin(n\pi) = 0$ for any n. So

$$a_n = \frac{n \ln n}{n + 10}.$$

Then since

$$\lim_{n\to\infty} \frac{n \ln n}{n + 10} = \lim_{n\to\infty} \frac{\frac{n \ln n}{n}}{\frac{n+10}{n}} = \lim_{n\to\infty} \frac{\ln n}{1 + \frac{10}{n}} = \infty,$$

the sequence is divergent.

NOTE that since the limit does not exist, by Remark 8.1.12 (page 8 of Note 8.1), we don't know the relation between the limits of the sequence $\frac{n \ln n}{n+10}$ and that of the function $\frac{x \ln x}{x+10}$. Therefore we CANNOT turn to compute the limit of the function $\frac{x \ln x}{x+10}$ and use L'Hospital's Rule to solve it. It is wrong if you try to use L'Hospital's Rule even if it would give the same answer.