Speedrun of Exercises of Chapter 11

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11.2

Problem 1. A

A sequence is an ordered set of numbers.
A series is the summation of a sequence.

Problem 1. B

A convergent series is one where the sum of the series exists as a finite number.
A divergent series is one where the sum of the series exists as a finite number.

Problem 2

It would mean that the sum of the infinite series a_n is five.

Problem 3

I saw the answer so cant really do much now.

Problem 4

$$s_n = \frac{n^2 - 1}{4n^2 + 1}$$
$$\therefore \lim_{n \to \infty} s_n = \frac{1}{4}$$

Problem 5

1, 0.125, 0.037
Looks like it is convergent.
Imma not do 6-8 because main tera baap ka naukar nahi hun.

Problem 9

pukka convergent hai main guarantee deta huu

Problem 49

x=1

$$\frac{9}{10^n} = s_n$$
$$\therefore a = \frac{9}{10}, r = \frac{1}{10}$$
$$\therefore s_\infty = \frac{\frac{9}{10}}{1 - \frac{1}{10}}$$