Exercise 6.9
Mathematics 11 (PECTAA)
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# Exercise:-6.9

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Merging man and maths

Q1:- Find the $9^{th}$ term of the following harmonic sequences:

(i) $\frac{1}{3}, \frac{1}{5}, \frac{1}{7}, \ldots$

Reciprocal

$3, 5, 7, \ldots, a_9$

$a_1 = 3$

$d = 5-3 = 2$

$a_9 = a_1 + 8d$

$a_9 = 3 + 8(2)$

$a_9 = 3 + 16$

$a_9 = 19$

$a_9' = \frac{1}{19}$

(ii) $\frac{-1}{5}, \frac{-1}{3}, -1, \ldots$

Reciprocal

$-5, -3, -1, \ldots, a_9$

$a_1 = -5$

$d = -3-(-5) = 2$

$a_9 = a_1 + 8d$

$a_9 = -5 + 8(2)$

$a_9 = -5 + 18$

$a_9 = 11$

$a_9' = \frac{1}{11}$