

Problem for 2017 August

Proposed by Dan Jurca

For $n = 1, 2, 3, \dots$ let

$$a_n = 1 \times 4 \times 7 \times 10 \times \dots \times (3n - 2) \quad \text{and}$$
$$b_n = 2 \times 5 \times 8 \times 11 \times \dots \times (3n - 1).$$

Does the sequence $(b_n/a_n)_{n=1}^{\infty}$ converge?