Generalization of Mathematical induction

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Abstract: This paper is written to prove that although supposes are many, it can be proven in mathematical induction.

There are nature number, ‘a’, ‘k’, ‘B’ and ‘C’.

P(x) is a proposition.

[ About P(x) ]

When n is a
P(a) is true.

When n is k
suppose P(k) is true.

When n is k + 1
suppose P(k + 1) is true.

\[ \cdots \]

When n is k + B - 1
suppose P(k + B - 1) is true.
(totally supposed as B times)

When n is k + B
prove P(k + B) is true. ]
This [] is \( M(B) \).
And I’ll prove \( P(x) \ (x \geq a) \) is true in \( M(B) \) \((B \geq 1)\).

About \( M(B) \)

When \( B \) is 1
\( M(1) \) is mathematical induction.

When \( B \) is \( C \)
(1) suppose \( M(C) \) is true.
That is if \( P(k + C) \) is true,
\( P(x) \) is true. \((x \geq a)\)

When \( B \) is \( C + 1 \)
\( P(n) \) is true ever since \( n \) is \( k + C \).
As \( P(k + C) \) is true, by (1) suppose,
\( P(x) \) is true. \((x \geq a)\)

So, \( M(B) \) \((B \geq 1)\) is true.