

Аккадэнскі агульадукацыйны сярэдні школа

**ЖУРНАЛ  
КРУЖКОВОЙ РАБОТЫ**

2023-2024 учебный год



# Mathematical Induction

Let  $P(n)$  be a statement involving  $n$ .

1.  $P(1)$  is true.

2. If  $P(k)$  is true, then  $P(k+1)$  is true.

## Example 1

Let  $P(n)$  be the statement  $1 + 2 + \dots + n = \frac{n(n+1)}{2}$ .

1.  $P(1)$  is true.

2. Assume  $P(k)$  is true. Then  $1 + 2 + \dots + k = \frac{k(k+1)}{2}$ .

Now,  $1 + 2 + \dots + k + (k+1) = \frac{k(k+1)}{2} + (k+1) = \frac{k(k+1) + 2(k+1)}{2} = \frac{(k+1)(k+2)}{2}$ .

Handwritten notes on graph paper, including a title "The History of the World" and a list of dates.

The History of the World

1. 10000 BC - First humans in North America  
2. 8000 BC - First farming  
3. 5000 BC - First writing  
4. 3000 BC - First cities  
5. 1000 BC - First empires  
6. 500 BC - First philosophies  
7. 100 BC - First religions  
8. 500 AD - First universities  
9. 1000 AD - First printing  
10. 1500 AD - First global exploration  
11. 1800 AD - First industrial revolution  
12. 1900 AD - First world war  
13. 1945 AD - Second world war  
14. 1950 AD - First nuclear war  
15. 1960 AD - First space exploration  
16. 1970 AD - First computer  
17. 1980 AD - First internet  
18. 1990 AD - First world wide web  
19. 2000 AD - First millennium  
20. 2010 AD - First global financial crisis  
21. 2020 AD - First global pandemic

Handwritten notes on graph paper, including a title "The History of the World" and a list of dates.

The History of the World

1. 10000 BC - First humans in North America  
2. 8000 BC - First farming  
3. 5000 BC - First writing  
4. 3000 BC - First cities  
5. 1000 BC - First empires  
6. 500 BC - First philosophies  
7. 100 BC - First religions  
8. 500 AD - First universities  
9. 1000 AD - First printing  
10. 1500 AD - First global exploration  
11. 1800 AD - First industrial revolution  
12. 1900 AD - First world war  
13. 1945 AD - Second world war  
14. 1950 AD - First nuclear war  
15. 1960 AD - First space exploration  
16. 1970 AD - First computer  
17. 1980 AD - First internet  
18. 1990 AD - First world wide web  
19. 2000 AD - First millennium  
20. 2010 AD - First global financial crisis  
21. 2020 AD - First global pandemic





