Aufgaben vollständige Induktion

1) $1^3 + 2^3 + 3^3 + \dots n^3 = \frac{n^2(n+1)^2}{4}$

2) $1 + 2 + 3 + \dots n = \frac{n(n+1)}{2}$

3) $a + aq + aq^2 + \dots + aq^{n-1} = a\frac{q^n - 1}{q-1}$

4) $\frac{1}{1*2} + \frac{1}{2*3} + \dots + \frac{1}{n(n+1)} = \frac{n}{n+1}$

5) $2+4+6+8+\dots+2n = n\,(\,n+1)$

6) $1+3+5+7+\dots+ 2n-1 = n^2$

7) $1^2+2^2+3^2+\dots n^2 = \frac{n(n+1)(2n+1)}{6}$

8) $1 + 4 + 7 + \dots + 3n-2 = \frac{n(3n-1)}{2}$

9) $2 + 6 + 10 + \dots 4n-2 = 2n^2$

10) $3 + 6 + 9 + \dots + 3n = \frac{3n^2+3n}{2}$