

1. 1, 6, 15, 28, 45
2. $-8, -4, -2, -1, -\frac{1}{2}$
3. 30
4. $-1 + 1 + 3 + \dots + 97 + 99$
5. $\sum_{n=1}^{10} 2n$
6. $\sum_{n=1}^{39} n(n+1)$
7. arithmetic; $a_n = 3n$
8. geometric; $a_n = 27\left(-\frac{1}{3}\right)^{n-1}$
9. 48
10. $n = 101$
11. $\frac{8}{27}$
12. $S_{12} = 168$
13. 832.3
14. $n = 31$
15. $\frac{80}{81}$
16. $\frac{341}{512}$
17. 2
18. $\frac{251}{990}$