Questions 1 through 4 refer to the following example: A car dealership used to sell 2 cars per week \((P_0 = 2)\). But then a new manager took over and introduced a miraculous sales promotion system that caused weekly sales figures to grow linearly. During the first week of the new system, the dealership sold 6 cars \((P_1 = 6)\). The second week the dealership sold 10 cars \((P_2 = 10)\).

1. How many cars were sold in the third week?
2. How many cars were sold in the 20th week?
3. If the manager gets $100 bonus for every car sold, how much total bonus money did the manager make in the first four weeks? How about in the first 20 weeks? (Careful: \(P_0\) does not get included in this sum.)
4. If \(P_N\) denotes the number of cars sold in the \(N\)th week then the explicit formula for \(P_N\) is _________ and the recursive formula for \(P_N\) is _________.

5. \(5 + 8 + 11 + 14 + \cdots + 299 + 302 = \)
   \[ \text{100 terms} \]
6. \(2 + 12 + 22 + 32 + \cdots = \)
   \[ \text{151 terms} \]
7. \(7 + 10 + 13 + \cdots + 172 = \)
8. A bank offers a 6% annual interest rate compounded monthly. The periodic interest is _________.
9. A bank offers a 6% annual interest rate compounded monthly. The annual yield is approximately _________.
10. How much does $543 grow to in four years if left in a savings account that pays 10.5% interest compounded annually?
11. How much does $823.25 grow to in five years if left in a savings account that pays 12% annual interest compounded monthly?
12. On January 1 you invest $500 for one year and leave all interest to accumulate. On April 1, $5 is credited to your account; on July 1, $10 is credited to your account; on October 1, $15 is credited to your account; and on December 1, $20 is credited to your account. How much money have you made? What is the annual yield on your investment?