```python
In [1]:   # Sum of first N terms of an AP

          # By interactive method

          a = float(input("First Term of AP = "))
          d = float(input("Common Difference = "))
          n = int(input("Number of terms in sum = "))

          c = 0 # c is the counter
          r = 0
          while c < n:
              r = r + a + c*d
              c += 1
          print(r)
```

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```python
In [2]:   # Sum of first N terms of a GP

          # By interactive method

          p = int(input("Initial Term of GP = "))
          k = int(input("Common ratio = "))
          l = int(input("No of terms = "))

          v = 0 # v is the counter
          j = 0
          while v < l:
              j = j + p*(k**v)
              v += 1
          print(j)
```

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```python
In [4]:   # Sum of first N terms of an HP

          u = float(input("Denominator of First Term of HP = "))
          o = float(input("Common Difference = "))
          t = int(input("No of terms = "))

          g = 0 # g holds the definition of HP
          m = 0 # m is the counter
          y = 0 # y is the dummy
          while m < t:
              if u != 0:
                  g = 1/(u + o*m)
                  y = y + g
                  m += 1
              else:
                  print("Problem faced.")
                  break

          print(y)
```

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