

# Quadratic Patterns Solutions

1.
  - i. (a) 13  
(b) 6  
(c) 57, 83, 115
  - ii. (a) 6  
(b) 9  
(c) 80, 121, 171
  - iii. (a) 16  
(b) 1  
(c) 26, 31, 37
  - iv. (a) 12  
(b) 1  
(c) 26, 32, 39
  - v. (a) 15  
(b) 8  
(c) 95, 135, 183
  - vi. (a) 8  
(b)  $-2$   
(c) 8, 2,  $-6$
  - vii. (a) 5  
(b)  $-4$   
(c)  $-25$ ,  $-43$ ,  $-65$
  - viii. (a) 1  
(b) 3  
(c) 7, 16, 28
2.
  - i. 18, 24
  - ii. 38, 51
  - iii. 47, 62
3.
  - i.  $T_n = n^2 + 6$
  - ii.  $T_n = n^2 + 2n - 1$
  - iii.  $T_n = 2n^2$