**TEST CASE 1**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **3**  **3**  **5 2 1**  **4 3 2** | **20 23 20 7 2** |

**TEST CASE 2**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **3**  **4**  **2 3 5**  **1 0 6 3** | **2 3 17 24 39 15** |

**TEST CASE 3**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **2**  **3**  **1 2**  **3 4 5** | **3 10 13 10** |

**TEST CASE 4**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **4**  **3**  **1 0 3 2**  **2 0 4** | **2 0 10 4 12 8** |

**TEST CASE 5**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **4**  **5**  **9 8 7 6**  **5 4 3 2 1** | **45 76 94 100 70 40 19 6** |

**TEST CASE 6**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **5**  **6**  **7 8 5 9 1**  **2 4 6 8 3 7** | **14 44 84 142 153 171 149 70 66 7** |

**TEST CASE 7**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **2**  **7**  **22 23**  **17 16 36 44 37 43 12** | **374 743 1160 1796 1826 1797 1253 276** |

**TEST CASE 8**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **9**  **8**  **12 22 49 29 58 84 74 26 51**  **72 38 20 16 32 28 85 33** | **864 2040 4604 4582 6994 10656 13348 11858 15043 12036 12043 12774 11422 6080 5193 1683** |

**TEST CASE 9**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **100**  **11**  **43 57 41 87 72 28 68 44 21 97 36 84 37 18 99 75 83 8 52 10 47 53 54 31 55 92 4 50 35 29 26 89 93 25 51 81 71 73 96 91 24 74 15 58 42 94 76 30 46 13 100 61 33 11 19 90 1 6 45 86 69 22 40 65 5 9 62 59 80 27 2 77 3 85 60 23 67 79 95 20 70 16 14 49 82 88 17 64 34 7 63 66 12 48 39 98 78 56 38 32**  **93 17 95 100 60 21 15 86 79 89 1** | **3999 6032 8867 18503 20350 20516 26642 25742 27022 36711 32977 40998 37073 35359 37660 32681 38708 34969 45952 30842 30304 28539 31831 37240 33901 34719 21082 32215 27659 28606 25929 31476 33812 30724 38456 33804 32877 33271 42318 47808 44369 47348 35704 40719 37655 43198 43248 39987 41826 29196 36838 27617 36015 37333 35144 32177 16787 27044 29597 31967 24071 23121 32343 30808 22815 19679 28277 29705 32540 28701 28906 31884 18441 26209 27675 33669 36604 32473 33536 28141 43580 32789 32874 30699 31628 38760 34316 42409 29605 25464 26520 28976 30983 35093 31381 30506 29477 32927 36534 36021 28090 21588 23619 21527 20981 15212 10816 5966 2886 32** |

**TEST CASE 10**

| **INPUT** | **OUTPUT** |
| --- | --- |
| **89**  **95**  **89 78 20 90 28 22 93 50 14 17 96 26 87 64 98 32 24 23 68 29 77 30 54 75 42 37 38 95 49 34 65 15 40 12 58 59 52 62 46 47 39 16 72 83 82 66 43 81 19 18 36 31 11 56 69 21 63 57 73 67 41 51 25 85 44 80 74 71 53 70 99 94 79 45 84 33 88 61 76 60 92 48 97 86 55 13 35 91 27**  **17 51 92 87 13 91 93 31 88 10 48 83 69 81 77 71 4 70 53 21 97 28 59 0 72 75 62 76 24 7 35 37 57 90 9 23 14 50 5 16 12 40 45 96 26 18 8 15 52 49 11 95 20 89 39 19 22 32 38 43 47 78 60 73 34 33 86 63 41 1 94 67 61 44 25 80 55 65 29 64 79 98 68 85 58 3 6 74 46 54 30 42 27 56 84** | **1513 5865 12506 17469 14849 20935 28744 23056 33922 33272 23554 39398 44118 46084 52612 58953 54254 57661 63758 53802 70784 67292 61144 71254 73721 84956 82390 85607 88221 79484 89240 87162 94267 96535 92892 91413 93235 97736 104246 97047 107217 93570 102905 108418 110950 118754 109206 122806 116130 125783 118303 119484 120974 123895 131008 134181 130292 135213 125748 139674 139376 149415 146647 152653 156190 155616 158207 171591 166502 175832 173915 198672 183833 198840 187816 193973 208538 208060 216564 208136 226777 224422 224681 238154 240407 246081 236200 242381 244172 247368 253198 237150 223817 246609 243091 238658 229290 230201 221803 206693 218382 209138 207823 196449 205818 193845 194546 204730 187840 186563 177341 175279 170359 171932 178015 165560 160947 168749 157371 166675 162279 156574 148145 154583 159328 155726 152432 149183 144642 151001 148930 152030 135494 145923 140073 142520 143184 142968 139666 128095 136556 132306 124725 120353 124464 121191 125926 124260 121348 115928 118544 107973 108041 111239 103894 94283 84092 95921 90848 90815 80847 76955 72765 75991 69135 61799 54698 52046 45712 41937 43528 37324 27339 24927 27505 22560 22201 16313 10925 6643 8765 9156 2268** |