**Collatz Conjecture**

**Nama Pembuat Testcase:** Niko Sutiono

**Sample Input (1):**

2

5

9

**Sample Output (1):**

Case #1: 5 1

Case #2: 19 2

**Sample Input (2):**

3

27

39

44

**Sample Output (2):**

Case #1: 111 7

Case #2: 34 4

Case #3: 16 2

**Sample Input (3):**

9

837799

123456

235111

972348

233483

343422

322229

940230

522422

**Sample Output (3):**

Case #1: 524 35

Case #2: 61 8

Case #3: 106 11

Case #4: 183 15

Case #5: 124 12

Case #6: 140 10

Case #7: 96 10

Case #8: 170 15

Case #9: 133 14

**Sample Input (4):**

10

123456

234567

345678

456789

567890

678901

789012

890123

901234

987654

**Sample Output (4):**

Case #1: 61 8

Case #2: 181 14

Case #3: 158 14

Case #4: 55 7

Case #5: 84 10

Case #6: 229 19

Case #7: 193 15

Case #8: 188 15

Case #9: 87 8

Case #10: 183 14

**Sample Input (5):**

10

12

22

8

65

73

92

213

50

60

32

**Sample Output (5):**

Case #1: 9 1

Case #2: 15 2

Case #3: 3 1

Case #4: 27 3

Case #5: 115 8

Case #6: 17 2

Case #7: 13 3

Case #8: 24 3

Case #9: 19 2

Case #10: 5 1

**Sample Input (6):**

5

4321

5432

6543

7654

8765

**Sample Output (6):**

Case #1: 170 13

Case #2: 67 7

Case #3: 137 11

Case #4: 83 9

Case #5: 78 10

**Sample Input (7):**

10

4729

5831

2967

8154

1248

7395

6823

9410

3572

5038

**Sample Output (7):**

Case #1: 59 8

Case #2: 49 6

Case #3: 141 11

Case #4: 65 7

Case #5: 39 5

Case #6: 39 6

Case #7: 119 9

Case #8: 60 7

Case #9: 74 8

Case #10: 85 7

**Sample Input (8):**

10

8192

16384

32768

49152

65536

131072

262144

393216

524288

786432

**Sample Output (8):**

Case #1: 13 4

Case #2: 14 4

Case #3: 15 5

Case #4: 21 5

Case #5: 16 5

Case #6: 17 5

Case #7: 18 6

Case #8: 24 6

Case #9: 19 6

Case #10: 25 7

**Sample Input (9):**

6

10

100

1000

10000

100000

1000000

**Sample Output (9):**

Case #1: 6 1

Case #2: 25 3

Case #3: 111 9

Case #4: 29 5

Case #5: 128 11

Case #6: 152 13

**Sample Input (10):**

10

1

11

111

1111

11111

111111

2

3

4

999999

**Sample Output (10):**

Case #1: 3 0

Case #2: 14 2

Case #3: 69 6

Case #4: 31 5

Case #5: 55 8

Case #6: 115 13

Case #7: 1 0

Case #8: 7 1

Case #9: 2 0

Case #10: 258 20