**INFO6205 - Height-weighted Quick Union with Path Compression**

Here is the screenshot of unit test for “*UF\_HWQUPC*” class:

文本

描述已自动生成

Here is the screenshot of “*HWQUPC\_Solution*” class to get number of connections of n sites:

电脑萤幕的截图

描述已自动生成

/src/main/java/edu.neu.coe.info6205/union\_find/HWQUPC\_Solution.java

*Output:*

Input Number n: 100

n = 100, Number of connections generated: 99

n = 99, Number of connections generated: 98

n = 98, Number of connections generated: 97

n = 97, Number of connections generated: 96

n = 96, Number of connections generated: 95

n = 95, Number of connections generated: 94

n = 94, Number of connections generated: 93

n = 93, Number of connections generated: 92

n = 92, Number of connections generated: 91

n = 91, Number of connections generated: 90

n = 90, Number of connections generated: 89

n = 89, Number of connections generated: 88

n = 88, Number of connections generated: 87

n = 87, Number of connections generated: 86

n = 86, Number of connections generated: 85

n = 85, Number of connections generated: 84

n = 84, Number of connections generated: 83

n = 83, Number of connections generated: 82

n = 82, Number of connections generated: 81

n = 81, Number of connections generated: 80

n = 80, Number of connections generated: 79

n = 79, Number of connections generated: 78

n = 78, Number of connections generated: 77

n = 77, Number of connections generated: 76

n = 76, Number of connections generated: 75

n = 75, Number of connections generated: 74

n = 74, Number of connections generated: 73

n = 73, Number of connections generated: 72

n = 72, Number of connections generated: 71

n = 71, Number of connections generated: 70

n = 70, Number of connections generated: 69

n = 69, Number of connections generated: 68

n = 68, Number of connections generated: 67

n = 67, Number of connections generated: 66

n = 66, Number of connections generated: 65

n = 65, Number of connections generated: 64

n = 64, Number of connections generated: 63

n = 63, Number of connections generated: 62

n = 62, Number of connections generated: 61

n = 61, Number of connections generated: 60

n = 60, Number of connections generated: 59

n = 59, Number of connections generated: 58

n = 58, Number of connections generated: 57

n = 57, Number of connections generated: 56

n = 56, Number of connections generated: 55

n = 55, Number of connections generated: 54

n = 54, Number of connections generated: 53

n = 53, Number of connections generated: 52

n = 52, Number of connections generated: 51

n = 51, Number of connections generated: 50

n = 50, Number of connections generated: 49

n = 49, Number of connections generated: 48

n = 48, Number of connections generated: 47

n = 47, Number of connections generated: 46

n = 46, Number of connections generated: 45

n = 45, Number of connections generated: 44

n = 44, Number of connections generated: 43

n = 43, Number of connections generated: 42

n = 42, Number of connections generated: 41

n = 41, Number of connections generated: 40

n = 40, Number of connections generated: 39

n = 39, Number of connections generated: 38

n = 38, Number of connections generated: 37

n = 37, Number of connections generated: 36

n = 36, Number of connections generated: 35

n = 35, Number of connections generated: 34

n = 34, Number of connections generated: 33

n = 33, Number of connections generated: 32

n = 32, Number of connections generated: 31

n = 31, Number of connections generated: 30

n = 30, Number of connections generated: 29

n = 29, Number of connections generated: 28

n = 28, Number of connections generated: 27

n = 27, Number of connections generated: 26

n = 26, Number of connections generated: 25

n = 25, Number of connections generated: 24

n = 24, Number of connections generated: 23

n = 23, Number of connections generated: 22

n = 22, Number of connections generated: 21

n = 21, Number of connections generated: 20

n = 20, Number of connections generated: 19

n = 19, Number of connections generated: 18

n = 18, Number of connections generated: 17

n = 17, Number of connections generated: 16

n = 16, Number of connections generated: 15

n = 15, Number of connections generated: 14

n = 14, Number of connections generated: 13

n = 13, Number of connections generated: 12

n = 12, Number of connections generated: 11

n = 11, Number of connections generated: 10

n = 10, Number of connections generated: 9

n = 9, Number of connections generated: 8

n = 8, Number of connections generated: 7

n = 7, Number of connections generated: 6

n = 6, Number of connections generated: 5

n = 5, Number of connections generated: 4

n = 4, Number of connections generated: 3

n = 3, Number of connections generated: 2

n = 2, Number of connections generated: 1

n = 1, Number of connections generated: 0

**Conclusion:**

The number of objects (n) and the number of pairs (m) generated to union n objects into only one is: