

**While loops (indefinite pre-test iteration, chapter 5)**

Do NOT write on this test. Record all answers on the bubble sheet. **Closed book. No notes.** Work strictly from memory. **No calculators. No time limit. Scratch paper okay.**

How many times does the body of the loop execute? (Mark 9 if 9 or more.)

- 1/1p. `int p=-3; while( --p >= -10 ) body;`
- 2/1p. `int b=-7; while( --b > -13 ) body;`
- 3/1p. `int m=3; while( --m != 0 ) body;`
- 4/1p. `int q=7; while( --q > 6 ) body;`
- 5/1p. `int u=0; while( --u > -9 ) body;`
- 6/1p. `int u=5; while( u-- >= 0 ) body;`
- 7/1p. `int i=-3; while( i-- != -3 ) body;`
- 8/1p. `int g=-8; while( g++ != -3 ) body;`
- 9/1p. `int u=-9; while( u-- < -2 ) body;`
- 10/1p. `int m=2; while( m++ <= 9 ) body;`
- 11/1p. `int w=-10; while( --w != -11 ) body;`
- 12/1p. `int q=-4; while( q-- > -10 ) body;`
- 13/1p. `int h=8; while( --h != 7 ) body;`
- 14/1p. `int n=3; while( n-- < 7 ) body;`
- 15/1p. `int h=7; while( --h >= 3 ) body;`
- 16/1p. `int j=6; while( j++ != 14 ) body;`
- 17/1p. `int q=4; while( q++ <= 4 ) body;`
- 18/1p. `int u=-3; while( --u != -10 ) body;`
- 19/1p. `int k=-3; while( k++ <= -4 ) body;`
- 20/1p. `int j=5; while( ++j != 9 ) body;`

Total points 20.

**Answer Key** (points per line)

1 (1).	7
2 (1).	5
3 (1).	2
4 (1).	0
5 (1).	8
6 (1).	6
7 (1).	0
8 (1).	5
9 (1).	9
10 (1).	8
11 (1).	0
12 (1).	6
13 (1).	0
14 (1).	9
15 (1).	4
16 (1).	8
17 (1).	1
18 (1).	6
19 (1).	0
20 (1).	3

Total points 20.