

CSE 142 Section Handout #2 Solutions

1.

Expression	Value	Expression	Value
$4 * 3/8 + 2.5 * 2$	6.0	$(2.5 + 3.5)/2$	3.0
$26 \% 10 \% 4 * 3$	6	$9/4 * 2.0 - 5/4$	3.0
$(5 * 7.0/2 - 2.5)/5 * 2$	6.0	$3 * 4 + 2 * 3$	18
$12/7 * 4.4 * 2/4$	2.2	$177 \% 100 \% 10/2$	3
"hello 34 " + 2 * 4	"hello 34 8"	$9/2.0 + 7/3 - 3.0/2$	5.0
"2 + 2 " + 3 + 4	"2 + 2 34"	$813 \% 100/3 + 2.4$	6.4
$3 + 4 + "2 + 2"$	"7 2 + 2"	$27/2/2.0 * (4.3 + 1.7) - 8/3$	37.0
$41 \% 7 * 3/5 + 5/2 * 2.5$	8.0	$89 \% (5 + 5) \% 5$	4
$22 + 4 * 2$	30	$4.0/2 * 9/2$	9.0
$10.0/2/4$	1.25	$392/10 \% 10/2$	4
$23 \% 8 \% 3$	1	$53/5/(0.6 + 1.4)/2 + 13/2$	8.5
$17 \% 10/4$	1	$8 * 2 - 7/4$	15
$8/5 + 13/2/3.0$	3.0	$37 \% 20 \% 3 * 4$	8
$12 - 2 - 3$	7	$2.5 * 2 + 8/5.0 + 10/3$	9.6
$6/2 + 7/3$	5	$2 * 3/4 * 2/4.0 + 4.5 - 1$	4.0
$6 * 7 \% 4$	2	$89 \% 10/4 * 2.0/5 +$ $(1.5 + 1.0/2) * 2$	4.8

2.

46
36
23
13

3.

a has value 4

b has value 2

c has value 3

(The code is rotating the values of the variables.)

4.

line	value	Sequence	Expression
1, 2, 3, 4, 5, 6, ...		2, 4, 6, 8, 10, 12, ...	$2 * \text{line}$
1, 2, 3, 4, 5, 6, ...		4, 19, 34, 49, 64, 79, ...	$15 * \text{line} - 11$
1, 2, 3, 4, 5, 6, ...		30, 20, 10, 0, -10, -20, ...	$-10 * \text{line} + 40$
1, 2, 3, 4, 5, 6, ...		-7, -3, 1, 5, 9, 13, ...	$4 * \text{line} - 11$

5.

A large 7x7 grid of asterisks forming a diamond shape. The grid is centered and has a total of 49 asterisks. The pattern is as follows:

Row 1: *
Row 2: * * *
Row 3: * * * * *
Row 4: * * * * * * *
Row 5: * * * * * * * *
Row 6: * * * * * * * * *
Row 7: * * * * * * * * * *

The grid is centered and has a total of 49 asterisks.

CSE 142 Section Handout #2 Solutions (continued)

6.

```

public static void drawFigure() {
    for (int line = 1; line <= 5; line++) {
        for (int i = 1; i <= -4 * line + 20; i++) {
            System.out.print("/");
        }
        for (int i = 1; i <= 8 * line - 8; i++) {
            System.out.print("*");
        }
        for (int i = 1; i <= -4 * line + 20; i++) {
            System.out.print("\\\\");
        }
        System.out.println();
    }
}

```

7.

line value	constant SIZE value	Number of characters	Expression
1, 2, 3, 4, 5, 6, ...	1	4, 6, 8, 10, 12, 14, ...	$2 * \text{line} + 2$
1, 2, 3, 4, 5, 6, ...	2	6, 8, 10, 12, 14, 16, ...	$2 * \text{line} + 4$
1, 2, 3, 4, 5, 6, ...	SIZE	---	$2 * \text{line} + (2 * \text{SIZE})$
1, 2, 3, 4, 5, 6, ...	3	13, 17, 21, 25, 29, 33, ...	$4 * \text{line} + 9$
1, 2, 3, 4, 5, 6, ...	5	19, 23, 27, 31, 35, 39, ...	$4 * \text{line} + 15$
1, 2, 3, 4, 5, 6, ...	SIZE	---	$4 * \text{line} + (3 * \text{SIZE})$
1, 2, 3, 4, 5, 6, ...	4	10, 9, 8, 7, 6, 5, ...	$-1 * \text{line} + 11$
1, 2, 3, 4, 5, 6, ...	9	20, 19, 18, 17, 16, 15, ...	$-1 * \text{line} + 21$
1, 2, 3, 4, 5, 6, ...	SIZE	---	$-1 * \text{line} + (2 * \text{SIZE} + 3)$

8.

```

public static final int SIZE = 5;
...

public static void drawFigure() {
    for (int line = 1; line <= SIZE; line++) {
        for (int i = 1; i <= -4 * line + 4 * SIZE; i++) {
            System.out.print("/");
        }
        for (int i = 1; i <= 8 * line - 8; i++) {
            System.out.print("*");
        }
        for (int i = 1; i <= -4 * line + 4 * SIZE; i++) {
            System.out.print("\\\\");
        }
        System.out.println();
    }
}

```