

## HW4: Signed Arithmetic

Due Feb 6 at 11:59pm

Points 40

Questions 4

Available until Feb 8 at 11:59pm

Time Limit None

### Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	5 minutes	38 out of 40

⚠ Correct answers will be available Feb 8 at 11:59pm - Feb 13 at 11:59am.

Score for this quiz: **38** out of 40

Submitted Feb 1 at 4:14pm

This attempt took 5 minutes.

Question 1					10 / 10 pts																								
<p>Performed the following in 4-bit signed addition: 1001 + 1111</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 15%; text-align: center; padding: 5px;">1</td> <td style="border: 1px solid black; width: 15%; text-align: center; padding: 5px;">1</td> <td style="border: 1px solid black; width: 15%; text-align: center; padding: 5px;">1</td> <td style="border: 1px solid black; width: 15%; text-align: center; padding: 5px;">1</td> <td style="border: 1px solid black; width: 15%; text-align: center; padding: 5px;">0</td> <td style="width: 10%;"></td> </tr> <tr> <td></td> <td style="text-align: center;">1</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">1</td> <td></td> </tr> <tr> <td style="text-align: right;">+</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> <td></td> </tr> <tr> <td></td> <td style="border: 1px solid black; text-align: center; padding: 5px;">1</td> <td style="border: 1px solid black; text-align: center; padding: 5px;">0</td> <td style="border: 1px solid black; text-align: center; padding: 5px;">0</td> <td style="border: 1px solid black; text-align: center; padding: 5px;">0</td> <td></td> </tr> </table> <p>Did Signed Overflow occur? (enter y for yes or n for no) <span style="border: 1px solid black; padding: 2px 10px;">n</span></p>						1	1	1	1	0			1	0	0	1		+	1	1	1	1			1	0	0	0	
1	1	1	1	0																									
	1	0	0	1																									
+	1	1	1	1																									
	1	0	0	0																									
<p><b>Answer 1:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px auto; text-align: center;">1</div>																													
<p><b>Answer 2:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px auto; text-align: center;">1</div>																													
<p><b>Answer 3:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px auto; text-align: center;">1</div>																													
<p><b>Answer 4:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px auto; text-align: center;">1</div>																													
<p><b>Answer 5:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px auto; text-align: center;">0</div>																													
<p><b>Answer 6:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px auto; text-align: center;">1</div>																													

**Answer 7:**

0

**Answer 8:**

0

**Answer 9:**

0

**Answer 10:**

n

**Question 2****10 / 10 pts**

Performed the following in 4-bit signed addition: 1101 + 1100

1	1	0	0	0
	1	1	0	1
+	1	1	0	0
	1	0	0	1

Did Signed Overflow occur? (enter y for yes or n for no)

n

**Answer 1:**

1

**Answer 2:**

1

**Answer 3:**

0

**Answer 4:**

0

**Answer 5:**

0

**Answer 6:**

1

**Answer 7:**

0

**Answer 8:**

0

**Answer 9:**

1

**Answer 10:**

n

**Question 3****10 / 10 pts**

Performed the following in 4-bit signed addition: 0110 + 0010

	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
		0	1	1	0
+		0	0	1	0
		<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

Did Signed Overflow occur? (enter y for yes or n for no)

**Answer 1:**

0

**Answer 2:**

1

**Answer 3:**

1

**Answer 4:**

0

**Answer 5:**

0

**Answer 6:**

1

**Answer 7:**

0

**Answer 8:**

0

**Answer 9:**

0

**Answer 10:**

y

Partial

**Question 4****8 / 10 pts**

Performed the following in 4-bit signed addition: 1001 + 1010

1	1	0	0	0
	1	0	0	1
+	1	0	1	0
	1	0	1	1

Did Signed Overflow occur? (enter y for yes or n for no)

y

**Answer 1:**

1

**Answer 2:**

1

**Answer 3:**

0

**Answer 4:**

0

**Answer 5:**

0

**Answer 6:**

1

**Answer 7:**

0

**Answer 8:**

1

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**Answer 9:**

1

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**Answer 10:**

y

Quiz Score: **38** out of 40