

Introduction to Computing System

Homework 1 Answer

Due date: 00:00 on July 8, 2018

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Homework

1.13

A and B solve the same problems.

1.15

Omitted

1.16

Omitted

1.17

Omitted

1.18

1 Countless

2.10

a. -6 b. 90 c. -2 d. 14803

2.11

a. 0110 0110 b. 0100 0000 c. 0010 0001 d. 1000 0000 e. 0111 1111

2.18

a. 12	b. 88	c. 11	d. 3
0001	0000 0011	0101	01
1011	0101 0101	0110	10
1100	0101 1000	1011	11

2.22

Omitted

2.24

Omitted

2.27

$$21845 + 14799 = 36644 > 32768$$

0101 0101 0101 0101

0011 1001 1100 1111

1000 1111 0010 0100

$$3876 = 36644 - 32768$$

2.34

a. 0100 b. 1000 c. 1101 d. 0110

0011 1101

or 0111 and 1000

not 0111

2.37

1000 AND ((n AND m AND (NOT s)) OR ((NOT n) AND (NOT m) AND s))

2.53

A	B	Q1	Q2
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0	0	1	0
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0	1	1	1
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1	0	1	1
---	---	---	---

1	1	0	1
---	---	---	---

2.54

X	Y	Z	Q1	Q2
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0	0	0	0	1
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0	0	1	0	1
---	---	---	---	---

0	1	0	0	1
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0	1	1	0	1
---	---	---	---	---

1	0	0	1	1
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1	0	1	1	1
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1	1	0	1	1
---	---	---	---	---

1	1	1	0	0
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2.56

1 1100 101

$$-1 * 1.101 * 2^{(12-7)} = -1 * (1+0.5+0+0.125) * 32 = -52$$