HW3.2. Floating Point to Binary (Randomized)

Feel free to check out the guide that we have prepared to help you in this problem.

For the following questions, we will be following the IEEE-754 Floating Point standard *but with different numbers of bits:* with 5 exponent bits (using an exponent bias of -15) and 13 mantissa bits.

Translate the following numbers to IEEE-754 binary notation. Do not include the binary prefix.

Q1.1: 1.5= 0011111000000000000 ✓ 100%

Q1.2: 1.6875*2^-15= 0000001101100000000 ✓ 100%

Q1.3: -6= 1100011000000000000 ✓ 100%

Translate the following numbers from IEEE-754 binary notation to decimal. If the number is infinite or a NaN, submit "inf" and "NaN", respectively

Q2.1:

0b0111110000000000001= NaN ✓ 100%

Q2.2:

0b0011110010000000000= 1.125 ✓ 100%

Q2.3:

0b0111110000000000000= inf ✓ 100%

Try a new variant

Correct answer

Translate the following numbers to IEEE-754 binary notation. Do not include the binary prefix.

Q1.1: 1.5= `0011111000000000000`

Q1.2: 1.6875*2^-15= `0000001101100000000`

Q1.3: -6= `1100011000000000000`

Translate the following numbers from IEEE-754 binary notation to decimal. If the number is infinite or a NaN, submit "inf" and "NaN", respectively

Q2.1: 0b0111110000000000001= `NaN`

Q2.2: 0b0011110010000000000= `1.125`

Q2.3: 0b0111110000000000000= `inf`

Submitted answer 4 correct: 100%

Submitted at 2022-09-13 01:45:55 (PDT)

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Translate the following numbers to IEEE-754 binary notation. Do not include the binary prefix.

Homework 3

Assessment overview

Total points: 100/100

Score: 100%

Question

Value: 50

History: 50

Awarded points: 50/50

Report an error in this question

Previous question

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Q1.1: 1.5= `0011111000000000000` ✓ 100%

Q1.2: 1.6875*2^-15= `0000001101100000000` ✓ 100%

Q1.3: -6= `1100011000000000000` ✓ 100%

Translate the following numbers from IEEE-754 binary notation to decimal. If the number is infinite or a NaN, submit "inf" and "NaN", respectively

Q2.1: 0b01111100000000000001= `NaN` ✓ 100%

Q2.2: 0b00111100100000000000= `1.125` ✓ 100%

Q2.3: 0b01111100000000000000= `inf` ✓ 100%

Submitted answer 3 **partially correct: 83%**

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Submitted answer 2 **partially correct: 83%**

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