Floating Point Arithmetic

Due May 7 at 11:59pm **Points** 113 **Questions** 3 **Available** until May 10 at 11:59pm **Time Limit** None

Instructions

For each exercise you will be given two numbers in floating point format.

You will then add the floating point quantities and next multiply them together.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	1,173 minutes	60 out of 113

⚠ Correct answers will be available on May 11 at 12am.

Score for this quiz: **60** out of 113
Submitted May 2 at 9:51am
This attempt took 1,173 minutes.

Partial **Question 1** 32 / 56 pts

num1: 0x425A0000; num2: 0x41998000

Decimal->num1(E): 132

Decimal->num1(P): 5

binary without trailing zeros->num1(F bin): 101101

Decimal->num2(E): 131

Decimal->num2(P): 4

binary without trailing zeros->num2(F bin): 00110011

Calculate num1 + num2

Decimal->Normalized Sum(E): 73.6875

binary without trailing zeros->Sum(Fbin): 0010011011

HEX without radix specifier->Sum(FP32): 93600000

Calculate num1*num2

in decimal->Initial calculation for Product(E): num1(E)+num2(E)-127= 136

binary without trailing zeros->Initial Product calculation: 1.000001010110111

decimal->Normalized Product(E): 1045.71875

binary without trailing zeros->Normalized Product(F bin): 00000101011101101O

hex without radix specifier->Product(FP32): 82B70000

Answer 1:

132

Answer 2:

5

Answer 3:

101101

Answer 4:

131

Answer 5:

4

Answer 6:

00110011

Answer 7:

73.6875

Answer 8:

0010011011

Answer 9:

93600000

Answer 10:

136

Answer 11:

1.000001010110111

Answer 12:

1045.71875

Answer 13:

000001010111011010111

Answer 14:

82B70000

Partial

Question 2

28 / 56 pts

num1: 0x42690000; num2: 0x41E30000

Decimal->num1(E): 10000100

Decimal->num1(P): 5

binary without trailing zeros->num1(F bin): 1101001

Decimal->num2(E): 10000011

Decimal->num2(P): 4

binary without trailing zeros->num2(F bin): 1100011

Calculate num1 + num2

Decimal->Normalized Sum(E): 86.625

binary without trailing zeros->Sum(Fbin): 010110101

HEX without radix specifier->Sum(FP32): AD400000

Calculate num1*num2

in decimal->Initial calculation for Product(E): num1(E)+num2(E)-127= 136

binary without trailing zeros->Initial Product calculation: 1.100111010011011

decimal->Normalized Product(E): 1652.84375

binary without trailing zeros->Normalized Product(F bin): 100111010011011

hex without radix specifier->Product(FP32): CE9B0000

Answer 1:

10000100

Answer 2:

5

Answer 3:

1101001

Answer 4:

10000011

Answer 5:

4

Answer 6:

1100011

Answer 7:

86.625

Answer 8:

010110101

Answer 9:

AD400000

Answer 10:

136

Answer 11:

1.100111010011011

Answer 12:

1652.84375

Answer 13:

100111010011011

Answer 14:

CE9B0000

Incorrect

Question 3

0 / 1 pts

num1: 0x3F160000; num2: 0x3F1E0000

Decimal->num1(E): 11111100

Decimal->num1(P):

binary without trailing zeros->num1(F bin):

Decimal->num2(E):

Decimal->num2(P):

binary without trailing zeros->num2(F bin):

Calculate num1 + num2

Decimal->Normalized Sum(E):

binary without trailing zeros->Sum(Fbin):

HEX without radix specifier->Sum(FP32):

Calculate num1*num2

in decimal->Initial calculation for Product(E): num1(E)+num2(E)-127=

binary without trailing zeros->Initial Product calculation:

decimal->Normalized Product(E):

binary without trailing zeros->Normalized Product(F bin):

hex without radix specifier->Product(FP32):

Answer 1:

11111100

Answer 2:

(You left this blank)

Answer 3:

(You left this blank)

Answer 4:

(You left this blank)

Answer 5:

(You left this blank)

Answer 6:

(You left this blank)

Answer 7:

(You left this blank)

Answer 8:

(You left this blank)

Answer 9:

(You left this blank)

Answer 10:

(You left this blank)

Answer 11:

(You left this blank)

Answer 12:

(You left this blank)

Answer 13:

(You left this blank)

Answer 14:

(You left this blank)

Quiz Score: **60** out of 113