floatingpoint.pdf, Patrick Anderson psa5dg, 2/17/16

35.3125

* Sign
  + Positive, meaning the first bit is 0.
* Exponent
  + 35.3125/2^5 = 1.103515625
  + 2^5 🡪 5+127 = 132
  + 132 in binary is 1000 0100.
* Mantissa
  + 1.103515625 – 1 = 0.103515625.
  + 0.103515625 = 1/16 + 1/32 + 1/128 + 1/512.
  + The binary for this is 0001 1010 1 (with trailing 0’s).
* Total: 0100 0010 0000 1101 0100 0000 0000 0000
* Hex Conversion: 0x42.0d.40.00
* Little Endian Conversion: 0x00400d42

0x00.40.1e.c3

* Big Endian Conversion: 0xc31e4000
* Binary Conversion: 1100 0011 0001 1110 0100 0000 0000 0000
* Sign
  + The first bit is 1, meaning it’s negative.
* Exponent
  + 1000 0110 is 134 in base 10.
  + 134-127 = 7.
  + 2^7.
* Mantissa
  + 0011 1100 1000 0000 0000 000
  + 1/8 + 1/16 + 1/32 + 1/64 + 1/512 = 0.236328125
  + 0.236328125 + 1 = 1.236328125.
* Result
  + -1.236328125\*2^7 = -158.25