2 Numbers are stored in a computer system using binary floating-point representation with:

- 12 bits for the mantissa
- 4 bits for the exponent
- two's complement form for both the mantissa and the exponent.

(a) Write the normalised floating-point representation of the following positive binary number using this system.

0.00000001110101101

Mantissa **Exponent**

[2]

(b) Calculate the normalised binary floating-point representation of –76.1875 in this system. Show your working.

Mantissa **Exponent**

Working .....

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[4]