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$$2. (8620)_{10} = (1000 \ 0111 \ 1010 \ 0100)_2$$

$$8620 \div 2$$

0

$$4310 \div 2$$

0

$$2155 \div 2$$

1

$$1077 \div 2$$

0

$$538 \div 2$$

0

$$269 \div 2$$

1

$$134 \div 2$$

0

$$67 \div 2$$

1

$$33 \div 2$$

1

$$16 \div 2$$

0

$$8 \div 2$$

0

$$4 \div 2$$

0

$$2 \div 2$$

0

$$1 \div 1$$

A1 - 75

$$75_{10} = 0100 \ 1011$$

$$1' C(100 \ 1011) = 0110100 + 1$$

$$= 10110101$$

A2. -46

$$46_{10} = 0010 \ 1110$$

$$1' C(0010 \ 1110) = 1101 \ 0001 + 1$$

$$= 1101 \ 0010$$

13. -110

$$110_0 = 0110\ 1110$$

$$\begin{aligned} 1C(0110\ 1100) &= 1001\ 001 + 1 \\ &= 1001\ 0010 \end{aligned}$$

14. -9.15₁₀

$$9 = 1001$$

$$0.15 = 00100\ 110$$

$$\Rightarrow -9.15 = 0000\ 1001.00100\ 110$$

$$= 1111\ 0110.1101\ 100 + 1$$

$$= 1111\ 0110.1101\ 1010$$

15. -16.25

$$\Rightarrow -16.25 = 0001\ 0000.0100\ 0000$$

$$= 1110\ 1111.1011\ 1111 + 1$$

$$= 1110\ 1111.1100\ 0000$$