

$$\text{min: } 0 \dots 0 \dots 0 = \underline{0}$$

$$\begin{aligned} \text{c) max: } & \overset{-2^{11}}{0} \overset{2^0}{1} \dots \overset{2^0}{1} \overset{2^{-12}}{1} = \\ & = 2^{10} + \dots + 2^0 + \left(\frac{1}{2}\right)^1 + \dots + \left(\frac{1}{2}\right)^{-12} = \end{aligned}$$

$$= \underline{2047 \frac{4095}{4096}}$$

$$\text{min: } \overset{-2^{11}}{1} \overset{2^0}{0} \dots 0 = -2^{11} = \underline{-2048}$$

$$\begin{aligned} \text{b) max: } & \overset{2^{10}}{0} \overset{2^0}{1} \dots \overset{2^0}{1} \overset{2^{-1}}{1} \dots \overset{2^{-12}}{1} = \\ & = \underline{2047 \frac{4095}{4096}} \end{aligned}$$

$$\begin{aligned} \text{min: } & \overset{2^{10}}{1} \overset{2^0}{1} \dots \overset{2^0}{1} \overset{2^{-1}}{\cancel{1}} \dots \overset{2^{-12}}{1} = \\ & = \underline{-2047 \frac{4095}{4096}} \end{aligned}$$