

$$M(X) = X^7 + X^5 + 1, \quad G(x) = X^3 + 1$$

Do the Long division:  $X^r M(X) / G(x)$ .

**Binary:**

$$X^7 + X^5 + 1 = 10100001$$

$$X^3 + 1 = 1001$$

$$\begin{array}{r}
 \phantom{1001} \overline{10110} \\
 1001 \overline{) 10100001} \\
 \underline{- 1001} \phantom{0000} \\
 1100 \phantom{000} \\
 \underline{- 1001} \phantom{00} \\
 1010 \phantom{00} \\
 \underline{- 1001} \phantom{0} \\
 111
 \end{array}$$

**Answer: 10110 Remainder: 111**