

*Hey Good Lookin'*

$$1 = C$$

*Hank Williams*

Diagram illustrating a quantum circuit structure with four stages, each separated by a vertical line. The stages are labeled with values below the lines:  $2^7$ ,  $5^7$ ,  $1$ , and  $5^7$ . The circuit is labeled "Fine" at the top right. The stages show a sequence of operations on qubits, represented by horizontal bars and numbers (6, 7, 5) indicating the qubit index and the operation being performed.

Diagram illustrating the 2-adic expansion of  $\frac{1}{5}$ . The number line is divided into segments by vertical lines. The segments are labeled with powers of 2 and powers of 5. The first segment is labeled  $2^7$  and contains the digits 6, #5, 6, 6, 6. The second segment is labeled  $5^7$  and contains the digits 7, 7, 6, 5. The third segment is labeled 1 and contains the digit 1. The fourth segment is labeled 1 and contains the digits 1, 1, 1.

Diagram 1: Initial segment  $[0, 1]$  with points  $0, \frac{1}{3}, \frac{2}{3}, 1$ .

Diagram 2: Removal of the middle third  $(\frac{1}{3}, \frac{2}{3})$  from the first segment.

Diagram 3: Removal of the middle third from the remaining two segments.

Diagram 4: Removal of the middle third from the remaining four segments.