Moore Graphs.

\[ n = d^2 + 1 \]
\[ n = m_1 + m_2 + 1 \]

\[ r_1 = \frac{-1 + \sqrt{4d - 3}}{2} \]
\[ r_2 = \frac{-1 - \sqrt{4d - 3}}{2} \]

\[ s = \sqrt{4d - 3} \]
\[ d + m_1 r_1 + m_2 r_2 = 0 \]

1. Rewrite the last equation in terms of only \( s \) and \( m_1 \).

The **Rational Roots Theorem** says that the rational roots of a polynomial with integer coefficients and leading coefficient 1 must be factors of the constant coefficient.

2. If \( s \) is rational, what are the possible values of \( s \)?