Routh's Test, continued

$$
\begin{array}{llllll}
s^n : & 1 & a_2 & a_4 & a_6 & \ldots \\
s^{n-1} : & a_1 & a_3 & a_5 & a_7 & \ldots \\
s^{n-2} : & b_1 & b_2 & b_3 & \ldots \\
s^{n-3} : & c_1 & c_2 & \ldots
\end{array}
$$

Next, we form the fourth row marked by s^{n-3}:

$$
s^{n-3} : \quad c_1 \quad c_2 \quad \ldots
$$

$$
\text{where} \quad c_1 = -\frac{1}{b_1} \det \begin{pmatrix} a_1 & a_3 \\ b_1 & b_2 \end{pmatrix} = -\frac{1}{b_1} \left(a_1 b_2 - a_3 b_1 \right)
$$

$$
c_2 = -\frac{1}{b_1} \det \begin{pmatrix} a_1 & a_5 \\ b_1 & b_3 \end{pmatrix} = -\frac{1}{b_1} \left(a_1 b_3 - a_5 b_1 \right)
$$

and so on ...