$$d_0^{(1)} = \frac{1}{12}, \quad d_1^{(1)} = -(\sigma - \frac{1}{2}), d_0^{(2)} = \frac{1}{288}, d_0^{(2)} = -\frac{1}{12}(\sigma - \frac{1}{2}), \quad d_2^{(2)} = \frac{1}{2}(\sigma - \frac{1}{2})^2 - \frac{1}{4}, d_3^{(2)} = (\sigma - \frac{1}{2})^2 + (\sigma - \frac{1}{2}) - \frac{1}{12}.$$