$$C(1,0) = 1.$$

$$C(2,0) = -\frac{1}{2\alpha+1}.$$
$$C(2,1) = \frac{2(\alpha+1)}{2\alpha+1}.$$

$$C(3,0) = -\frac{3}{2\alpha+1}.$$
$$C(3,1) = \frac{2(\alpha+2)}{2\alpha+1}.$$

$$C(4,0) = \frac{3}{(2\alpha+1)(2\alpha+3)}.$$
$$C(4,1) = -\frac{12(\alpha+2)}{(2\alpha+1)(2\alpha+3)}.$$
$$C(4,2) = \frac{4(\alpha+2)(\alpha+3)}{(2\alpha+1)(2\alpha+3)}.$$

$$C(5,0) = \frac{15}{(2\alpha+1)(2\alpha+3)}.$$
$$C(5,1) = -\frac{20(\alpha+3)}{(2\alpha+1)(2\alpha+3)}.$$
$$C(5,2) = \frac{4(\alpha+3)(\alpha+4)}{(2\alpha+1)(2\alpha+3)}.$$

$$C(6,0) = -\frac{15}{(2\alpha+1)(2\alpha+3)(2\alpha+5)}.$$
$$C(6,1) = \frac{90(\alpha+3)}{(2\alpha+1)(2\alpha+3)(2\alpha+5)}.$$
$$C(6,2) = -\frac{60(\alpha+3)(\alpha+4)}{(2\alpha+1)(2\alpha+3)(2\alpha+5)}.$$
$$C(6,3) = \frac{8(\alpha+3)(\alpha+4)(\alpha+5)}{(2\alpha+1)(2\alpha+3)(2\alpha+5)}.$$

$$\vdots$$
$$C(n,l) = ?$$