Orthogonal Projection Shifted Derivative Filters on the BCC Lattice

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Definitions of the Building Block Functions

■ Helper functions and definitions of 1D B-splines

```
R = 1 / 2 * {{1, -1, -1, 1}, {-1, 1, -1, 1}, {-1, -1, 1, 1}, {1, 1, 1, 1}};
```

```
Sbs[n_, x_] := InverseFourierTransform[((1 - Exp[-I * w]) / (I * w))^(n+1), w, x, FourierParameters → {1, -1}];
```

```
Box0[x_] = FullSimplify[Sbs[0, x]];
Tent[x_] = FullSimplify[Sbs[1, x]];
Quad[x_] = FullSimplify[Sbs[2, x]];
Cubic[x_] = FullSimplify[Sbs[3, x]];
Quartic[x_] = FullSimplify[Sbs[4, x]];
Tentprime[x_] = FullSimplify[Box0[x] - Box0[x - 1]];
Quadprime[x_] = FullSimplify[Tent[x] - Tent[x - 1]];
Cubicprime[x_] = FullSimplify[Quad[x] - Quad[x - 1]];
Quarticprime[x_] = FullSimplify[Cubic[x] - Cubic[x - 1]];
```

■ Linear, Quintic, Nonic, Tredecic and Septendecic Box Splines

```
Lbs[x_, y_, z_] := 4 * Integrate[1/16 Product[Box0[1/2 * R[[k]].{x, y, z, w}], {k, 1, 4}], {w, 0, 4}];
```

```
Qbs[x_, y_, z_] := 4 * Integrate[1/16 Product[Tent[1/2 * R[[k]].{x, y, z, w}], {k, 1, 4}], {w, 0, 8}];
```

```
Nbs[x_, y_, z_] :=
   4 * Integrate[1/16 Product[Quad[1/2 * R[[k]].{x, y, z, w}], {k, 1, 4}], {w, 0, 12}];
```

```
Tdbs[x_, y_, z_] :=
   4 * Integrate[1/16 Product[Cubic[1/2 * R[[k]].{x, y, z, w}], {k, 1, 4}], {w, 0, 16}];
```

```
Sdbs[x_, y_, z_] :=
   4 * Integrate[1/16 Product[Quartic[1/2 * R[[k]].{x, y, z, w}], {k, 1, 4}], {w, 0, 20}];
```

A function that generates BCC points within the bounding box $\left[-n, \quad n\right]^3$

```
BCCpoints[n_] :=
   Select[Tuples[Range[-n, n], 3], (EvenQ[#[[1]]] && EvenQ[#[[2]]] && EvenQ[#[[3]]] ) ||
      (OddQ[#[[1]]] && OddQ[#[[2]]] && OddQ[#[[3]]] ) &];
```

Directional Derivative Filters

Filters that orthogonally project the directional derivative of a first stage approximation. To recover the gradient, we need to compute diectional derivatives along the three principle directions of the BCC lattice.

■ **Directional Derivatives of a Nonic Box Spline orthogonally projected onto shifted Quintic Box Splines (NQs)**

For each directional derivative, we need a different type of shift.
Each can be computed by shifting the directional derivative of a Tredecic Box Spline (generated by Cubic B - Splines)

```
CdNQ[x_, y_, z_, i_] :=
  4
  -- * Integrate[Sum[Quarticprime[1/2 * R[[j]].{x, y, z, w}] * 1/2 R[[j]][[i]] * Product[Quartic[
  16

        1/2 * R[[k]].{x, y, z, w}], {k, Select[{1, 2, 3, 4}, # ≠ j &]}], {j, 1, 4}], {w, 0, 20}];

CdNQ1[x_, y_, z_] := CdNQ[x, y, z, 1] - CdNQ[x, y, z, 2] - CdNQ[x, y, z, 3];
CdNQ2[x_, y_, z_] := -CdNQ[x, y, z, 1] + CdNQ[x, y, z, 2] - CdNQ[x, y, z, 3];
CdNQ3[x_, y_, z_] := -CdNQ[x, y, z, 1] - CdNQ[x, y, z, 2] + CdNQ[x, y, z, 3];
```

Shifts for the different directions

```
shift = {1/2 {1, -1, -1}, 1/2 {-1, 1, -1}, 1/2 {-1, -1, 1}};

DdNQ1 =
  Select[{#, CdNQ1[#[[1]] + shift[[1, 1]], #[[2]] + shift[[1, 2]], #[[3]] + shift[[1, 3]]]} & /@
    BCCpoints[10], #[[2]] ≠ 0 &];
DdNQ2 = Select[{#, CdNQ2[#[[1]] + shift[[2, 1]], #[[2]] + shift[[2, 2]],
        #[[3]] + shift[[2, 3]]]} & /@ BCCpoints[10], #[[2]] ≠ 0 &];
DdNQ3 = Select[{#, CdNQ3[#[[1]] + shift[[3, 1]], #[[2]] + shift[[3, 2]],
        #[[3]] + shift[[3, 3]]]} & /@ BCCpoints[10], #[[2]] ≠ 0 &];
```

■ **Directional Derivatives of a Quintic Box Spline orthogonally projected onto a shifted Quintic Box Splines (QQs)**

```
CdQQ[x_, y_, z_, i_] :=
  4
  -- * Integrate[Sum[Cubicprime[1/2 * R[[j]].{x, y, z, w}] * 1/2 R[[j]][[i]] * Product[Cubic[
  16

        1/2 * R[[k]].{x, y, z, w}], {k, Select[{1, 2, 3, 4}, # ≠ j &]}], {j, 1, 4}], {w, 0, 16}];
CdQQ1[x_, y_, z_] := CdQQ[x, y, z, 1] - CdQQ[x, y, z, 2] - CdQQ[x, y, z, 3];
CdQQ2[x_, y_, z_] := -CdQQ[x, y, z, 1] + CdQQ[x, y, z, 2] - CdQQ[x, y, z, 3];
CdQQ3[x_, y_, z_] := -CdQQ[x, y, z, 1] - CdQQ[x, y, z, 2] + CdQQ[x, y, z, 3];
DdQQ1 =
  Select[{#, CdQQ1[#[[1]] + shift[[1, 1]], #[[2]] + shift[[1, 2]], #[[3]] + shift[[1, 3]]]} & /@
    BCCpoints[8], #[[2]] ≠ 0 &];
DdQQ2 = Select[{#, CdQQ2[#[[1]] + shift[[2, 1]], #[[2]] + shift[[2, 2]],
        #[[3]] + shift[[2, 3]]]} & /@ BCCpoints[8], #[[2]] ≠ 0 &];
DdQQ3 = Select[{#, CdQQ3[#[[1]] + shift[[3, 1]], #[[2]] + shift[[3, 2]],
        #[[3]] + shift[[3, 3]]]} & /@ BCCpoints[8], #[[2]] ≠ 0 &];
```

```
Export["DdQQ1.mat", Flatten[#] & /@ DdQQ1, "Mat"];
Export["DdQQ2.mat", Flatten[#] & /@ DdQQ2, "Mat"];
Export["DdQQ3.mat", Flatten[#] & /@ DdQQ3, "Mat"];
Export["DdNQ1.mat", Flatten[#] & /@ DdNQ1, "Mat"];
Export["DdNQ2.mat", Flatten[#] & /@ DdNQ2, "Mat"];
Export["DdNQ3.mat", Flatten[#] & /@ DdNQ3, "Mat"];
```

DdQQ1

$$\left\{\left\{\{-7, 1, 1\}, \frac{25}{4\,904\,976\,384}\right\}, \left\{\{-6, 0, 0\}, \frac{1829}{875\,888\,640}\right\}, \left\{\{-6, 0, 2\}, \frac{2153}{4\,904\,976\,384}\right\},\right.$$

$$\left\{\{-6, 2, 0\}, \frac{2153}{4\,904\,976\,384}\right\}, \left\{\{-6, 2, 2\}, \frac{1487}{24\,524\,881\,920}\right\}, \left\{\{-5, -1, -1\}, \frac{1663}{1\,362\,493\,440}\right\},$$

$$\left\{\{-5, -1, 1\}, \frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{-5, -1, 3\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-5, 1, -1\}, \frac{264\,307}{6\,131\,220\,480}\right\},$$

$$\left\{\{-5, 1, 1\}, \frac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{-5, 1, 3\}, \frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{-5, 3, -1\}, \frac{20\,467}{24\,524\,881\,920}\right\},$$

$$\left\{\{-5, 3, 1\}, \frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{-5, 3, 3\}, \frac{1007}{24\,524\,881\,920}\right\}, \left\{\{-4, -2, -2\}, -\frac{19\,709}{6\,131\,220\,480}\right\},$$

$$\left\{\{-4, -2, 0\}, \frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{-4, -2, 2\}, \frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-4, -2, 4\}, \frac{487}{4\,904\,976\,384}\right\},$$

$$\left\{\{-4, 0, -2\}, \frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{-4, 0, 0\}, \frac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{-4, 0, 2\}, \frac{81\,959}{35\,389\,440}\right\},$$

$$\left\{\{-4, 0, 4\}, \frac{6943}{908\,328\,960}\right\}, \left\{\{-4, 2, -2\}, \frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-4, 2, 0\}, \frac{81\,959}{35\,389\,440}\right\},$$

$$\left\{\{-4, 2, 2\}, \frac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{-4, 2, 4\}, \frac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{-4, 4, -2\}, \frac{487}{4\,904\,976\,384}\right\},$$

$$\left\{\{-4, 4, 0\}, \frac{6943}{908\,328\,960}\right\}, \left\{\{-4, 4, 2\}, \frac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{-4, 4, 4\}, \frac{1}{1\,167\,851\,520}\right\},$$

$$\left\{\{-3, -3, -3\}, -\frac{487}{4\,904\,976\,384}\right\}, \left\{\{-3, -3, -1\}, -\frac{294\,541}{6\,131\,220\,480}\right\},$$

$$\left\{\{-3, -3, 1\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{-3, -3, 3\}, \frac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{-3, -1, -3\}, -\frac{294\,541}{6\,131\,220\,480}\right\},$$

$$\left\{\{-3, -1, -1\}, -\frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{-3, -1, 1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{-3, -1, 3\}, \frac{34\,402\,589}{24\,524\,881\,920}\right\},$$

$$\left\{\{-3, -1, 5\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-3, 1, -3\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{-3, 1, -1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{-3, 1, 1\}, \frac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{-3, 1, 3\}, \frac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{-3, 1, 5\}, \frac{35\,267}{8\,174\,960\,640}\right\},$$

$\left\{\{-3, 3, -3\}, \dfrac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{-3, 3, -1\}, \dfrac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{-3, 3, 1\}, \dfrac{46\,791\,673}{8\,174\,960\,640}\right\},$

$\left\{\{-3, 3, 3\}, \dfrac{3\,451\,487}{8\,174\,960\,640}\right\}, \left\{\{-3, 3, 5\}, \dfrac{1007}{24\,524\,881\,920}\right\}, \left\{\{-3, 5, -1\}, \dfrac{20\,467}{24\,524\,881\,920}\right\},$

$\left\{\{-3, 5, 1\}, \dfrac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{-3, 5, 3\}, \dfrac{1007}{24\,524\,881\,920}\right\}, \left\{\{-2, -4, -2\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\},$

$\left\{\{-2, -4, 0\}, -\dfrac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{-2, -4, 2\}, -\dfrac{1663}{1\,362\,493\,440}\right\}, \left\{\{-2, -2, -4\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\},$

$\left\{\{-2, -2, -2\}, -\dfrac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{-2, -2, 0\}, -\dfrac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{-2, -2, 2\}, \dfrac{19\,866\,733}{12\,262\,440\,960}\right\},$

$\left\{\{-2, -2, 4\}, \dfrac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-2, 0, -4\}, -\dfrac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{-2, 0, -2\}, -\dfrac{28\,959\,439}{4\,087\,480\,320}\right\},$

$\left\{\{-2, 0, 0\}, \dfrac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{-2, 0, 2\}, \dfrac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{-2, 0, 4\}, \dfrac{81\,959}{35\,389\,440}\right\},$

$\left\{\{-2, 0, 6\}, \dfrac{2153}{4\,904\,976\,384}\right\}, \left\{\{-2, 2, -4\}, -\dfrac{1663}{1\,362\,493\,440}\right\}, \left\{\{-2, 2, -2\}, \dfrac{19\,866\,733}{12\,262\,440\,960}\right\},$

$\left\{\{-2, 2, 0\}, \dfrac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{-2, 2, 2\}, \dfrac{382\,327\,747}{8\,174\,960\,640}\right\}, \left\{\{-2, 2, 4\}, \dfrac{31\,775\,213}{24\,524\,881\,920}\right\},$

$\left\{\{-2, 2, 6\}, \dfrac{1487}{24\,524\,881\,920}\right\}, \left\{\{-2, 4, -2\}, \dfrac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-2, 4, 0\}, \dfrac{81\,959}{35\,389\,440}\right\},$

$\left\{\{-2, 4, 2\}, \dfrac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{-2, 4, 4\}, \dfrac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{-2, 6, 0\}, \dfrac{2153}{4\,904\,976\,384}\right\},$

$\left\{\{-2, 6, 2\}, \dfrac{1487}{24\,524\,881\,920}\right\}, \left\{\{-1, -5, -1\}, -\dfrac{2153}{4\,904\,976\,384}\right\}, \left\{\{-1, -5, 1\}, -\dfrac{1829}{875\,888\,640}\right\},$

$\left\{\{-1, -3, -3\}, -\dfrac{6943}{908\,328\,960}\right\}, \left\{\{-1, -3, -1\}, -\dfrac{81\,959}{35\,389\,440}\right\}, \left\{\{-1, -3, 1\}, -\dfrac{11\,016\,701}{4\,087\,480\,320}\right\},$

$\left\{\{-1, -3, 3\}, -\dfrac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{-1, -1, -5\}, -\dfrac{2153}{4\,904\,976\,384}\right\}, \left\{\{-1, -1, -3\}, -\dfrac{81\,959}{35\,389\,440}\right\},$

$\left\{\{-1, -1, -1\}, -\dfrac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{-1, -1, 1\}, -\dfrac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{-1, -1, 3\}, \dfrac{28\,959\,439}{4\,087\,480\,320}\right\},$

$\left\{\{-1, -1, 5\}, \dfrac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{-1, 1, -5\}, -\dfrac{1829}{875\,888\,640}\right\}, \left\{\{-1, 1, -3\}, -\dfrac{11\,016\,701}{4\,087\,480\,320}\right\},$

$\left\{\{-1, 1, -1\}, -\dfrac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{-1, 1, 1\}, \dfrac{139\,391\,293}{1\,167\,851\,520}\right\}, \left\{\{-1, 1, 3\}, \dfrac{102\,820\,547}{2\,724\,986\,880}\right\},$

$\left\{\{-1, 1, 5\}, \dfrac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{-1, 1, 7\}, \dfrac{25}{4\,904\,976\,384}\right\}, \left\{\{-1, 3, -3\}, -\dfrac{21\,773}{4\,087\,480\,320}\right\},$

$$\left\{\{-1,\,3,\,-1\},\,\frac{28\,959\,439}{4\,087\,480\,320}\right\},\,\left\{\{-1,\,3,\,1\},\,\frac{102\,820\,547}{2\,724\,986\,880}\right\},\,\left\{\{-1,\,3,\,3\},\,\frac{46\,791\,673}{8\,174\,960\,640}\right\},$$

$$\left\{\{-1,\,3,\,5\},\,\frac{35\,267}{8\,174\,960\,640}\right\},\,\left\{\{-1,\,5,\,-1\},\,\frac{264\,307}{6\,131\,220\,480}\right\},\,\left\{\{-1,\,5,\,1\},\,\frac{8\,221\,823}{24\,524\,881\,920}\right\},$$

$$\left\{\{-1,\,5,\,3\},\,\frac{35\,267}{8\,174\,960\,640}\right\},\,\left\{\{-1,\,7,\,1\},\,\frac{25}{4\,904\,976\,384}\right\},\,\left\{\{0,\,-6,\,0\},\,-\frac{25}{4\,904\,976\,384}\right\},$$

$$\left\{\{0,\,-4,\,-2\},\,-\frac{35\,267}{8\,174\,960\,640}\right\},\,\left\{\{0,\,-4,\,0\},\,-\frac{8\,221\,823}{24\,524\,881\,920}\right\},\,\left\{\{0,\,-4,\,2\},\,-\frac{264\,307}{6\,131\,220\,480}\right\},$$

$$\left\{\{0,\,-2,\,-4\},\,-\frac{35\,267}{8\,174\,960\,640}\right\},\,\left\{\{0,\,-2,\,-2\},\,-\frac{46\,791\,673}{8\,174\,960\,640}\right\},\,\left\{\{0,\,-2,\,0\},\,-\frac{102\,820\,547}{2\,724\,986\,880}\right\},$$

$$\left\{\{0,\,-2,\,2\},\,-\frac{28\,959\,439}{4\,087\,480\,320}\right\},\,\left\{\{0,\,-2,\,4\},\,\frac{21\,773}{4\,087\,480\,320}\right\},\,\left\{\{0,\,0,\,-6\},\,-\frac{25}{4\,904\,976\,384}\right\},$$

$$\left\{\{0,\,0,\,-4\},\,-\frac{8\,221\,823}{24\,524\,881\,920}\right\},\,\left\{\{0,\,0,\,-2\},\,-\frac{102\,820\,547}{2\,724\,986\,880}\right\},\,\left\{\{0,\,0,\,0\},\,-\frac{139\,391\,293}{1\,167\,851\,520}\right\},$$

$$\left\{\{0,\,0,\,2\},\,\frac{4\,219\,589}{222\,953\,472}\right\},\,\left\{\{0,\,0,\,4\},\,\frac{11\,016\,701}{4\,087\,480\,320}\right\},\,\left\{\{0,\,0,\,6\},\,\frac{1829}{875\,888\,640}\right\},$$

$$\left\{\{0,\,2,\,-4\},\,-\frac{264\,307}{6\,131\,220\,480}\right\},\,\left\{\{0,\,2,\,-2\},\,-\frac{28\,959\,439}{4\,087\,480\,320}\right\},\,\left\{\{0,\,2,\,0\},\,\frac{4\,219\,589}{222\,953\,472}\right\},$$

$$\left\{\{0,\,2,\,2\},\,\frac{1\,280\,877\,911}{24\,524\,881\,920}\right\},\,\left\{\{0,\,2,\,4\},\,\frac{81\,959}{35\,389\,440}\right\},\,\left\{\{0,\,2,\,6\},\,\frac{2153}{4\,904\,976\,384}\right\},$$

$$\left\{\{0,\,4,\,-2\},\,\frac{21\,773}{4\,087\,480\,320}\right\},\,\left\{\{0,\,4,\,0\},\,\frac{11\,016\,701}{4\,087\,480\,320}\right\},\,\left\{\{0,\,4,\,2\},\,\frac{81\,959}{35\,389\,440}\right\},$$

$$\left\{\{0,\,4,\,4\},\,\frac{6943}{908\,328\,960}\right\},\,\left\{\{0,\,6,\,0\},\,\frac{1829}{875\,888\,640}\right\},\,\left\{\{0,\,6,\,2\},\,\frac{2153}{4\,904\,976\,384}\right\},$$

$$\left\{\{1,\,-5,\,-1\},\,-\frac{1487}{24\,524\,881\,920}\right\},\,\left\{\{1,\,-5,\,1\},\,-\frac{2153}{4\,904\,976\,384}\right\},\,\left\{\{1,\,-3,\,-3\},\,-\frac{21\,001}{8\,174\,960\,640}\right\},$$

$$\left\{\{1,\,-3,\,-1\},\,-\frac{31\,775\,213}{24\,524\,881\,920}\right\},\,\left\{\{1,\,-3,\,1\},\,-\frac{81\,959}{35\,389\,440}\right\},\,\left\{\{1,\,-3,\,3\},\,-\frac{294\,541}{6\,131\,220\,480}\right\},$$

$$\left\{\{1,\,-1,\,-5\},\,-\frac{1487}{24\,524\,881\,920}\right\},\,\left\{\{1,\,-1,\,-3\},\,-\frac{31\,775\,213}{24\,524\,881\,920}\right\},\,\left\{\{1,\,-1,\,-1\},\,-\frac{382\,327\,747}{8\,174\,960\,640}\right\},$$

$$\left\{\{1,\,-1,\,1\},\,-\frac{1\,280\,877\,911}{24\,524\,881\,920}\right\},\,\left\{\{1,\,-1,\,3\},\,-\frac{19\,866\,733}{12\,262\,440\,960}\right\},\,\left\{\{1,\,-1,\,5\},\,\frac{1663}{1\,362\,493\,440}\right\},$$

$$\left\{\{1,\,1,\,-5\},\,-\frac{2153}{4\,904\,976\,384}\right\},\,\left\{\{1,\,1,\,-3\},\,-\frac{81\,959}{35\,389\,440}\right\},\,\left\{\{1,\,1,\,-1\},\,-\frac{1\,280\,877\,911}{24\,524\,881\,920}\right\},$$

$$\left\{\{1,\,1,\,1\},\,-\frac{4\,219\,589}{222\,953\,472}\right\},\,\left\{\{1,\,1,\,3\},\,\frac{28\,959\,439}{4\,087\,480\,320}\right\},\,\left\{\{1,\,1,\,5\},\,\frac{264\,307}{6\,131\,220\,480}\right\},$$

$$\left\{\{1, 3, -3\}, -\frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{1, 3, -1\}, -\frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{1, 3, 1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{1, 3, 3\}, \frac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{1, 3, 5\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{1, 5, -1\}, \frac{1663}{1\,362\,493\,440}\right\},$$

$$\left\{\{1, 5, 1\}, \frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{1, 5, 3\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{2, -4, -2\}, -\frac{1007}{24\,524\,881\,920}\right\},$$

$$\left\{\{2, -4, 0\}, -\frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{2, -4, 2\}, -\frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{2, -2, -4\}, -\frac{1007}{24\,524\,881\,920}\right\},$$

$$\left\{\{2, -2, -2\}, -\frac{3\,451\,487}{8\,174\,960\,640}\right\}, \left\{\{2, -2, 0\}, -\frac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{2, -2, 2\}, -\frac{34\,402\,589}{24\,524\,881\,920}\right\},$$

$$\left\{\{2, -2, 4\}, -\frac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{2, 0, -4\}, -\frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{2, 0, -2\}, -\frac{46\,791\,673}{8\,174\,960\,640}\right\},$$

$$\left\{\{2, 0, 0\}, -\frac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{2, 0, 2\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{2, 0, 4\}, \frac{21\,773}{4\,087\,480\,320}\right\},$$

$$\left\{\{2, 2, -4\}, -\frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{2, 2, -2\}, -\frac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{2, 2, 0\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{2, 2, 2\}, \frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{2, 2, 4\}, \frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{2, 4, -2\}, -\frac{19\,709}{6\,131\,220\,480}\right\},$$

$$\left\{\{2, 4, 0\}, \frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{2, 4, 2\}, \frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{2, 4, 4\}, \frac{487}{4\,904\,976\,384}\right\},$$

$$\left\{\{3, -3, -3\}, -\frac{1}{1\,167\,851\,520}\right\}, \left\{\{3, -3, -1\}, -\frac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{3, -3, 1\}, -\frac{6943}{908\,328\,960}\right\},$$

$$\left\{\{3, -3, 3\}, -\frac{487}{4\,904\,976\,384}\right\}, \left\{\{3, -1, -3\}, -\frac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{3, -1, -1\}, -\frac{31\,775\,213}{24\,524\,881\,920}\right\},$$

$$\left\{\{3, -1, 1\}, -\frac{81\,959}{35\,389\,440}\right\}, \left\{\{3, -1, 3\}, -\frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{3, 1, -3\}, -\frac{6943}{908\,328\,960}\right\},$$

$$\left\{\{3, 1, -1\}, -\frac{81\,959}{35\,389\,440}\right\}, \left\{\{3, 1, 1\}, -\frac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{3, 1, 3\}, -\frac{21\,773}{4\,087\,480\,320}\right\},$$

$$\left\{\{3, 3, -3\}, -\frac{487}{4\,904\,976\,384}\right\}, \left\{\{3, 3, -1\}, -\frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{3, 3, 1\}, -\frac{21\,773}{4\,087\,480\,320}\right\},$$

$$\left\{\{3, 3, 3\}, \frac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{4, -2, -2\}, -\frac{1007}{24\,524\,881\,920}\right\}, \left\{\{4, -2, 0\}, -\frac{35\,267}{8\,174\,960\,640}\right\},$$

$$\left\{\{4, -2, 2\}, -\frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{4, 0, -2\}, -\frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{4, 0, 0\}, -\frac{8\,221\,823}{24\,524\,881\,920}\right\},$$

$\left\{\{4, 0, 2\}, -\dfrac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{4, 2, -2\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{4, 2, 0\}, -\dfrac{264\,307}{6\,131\,220\,480}\right\},$

$\left\{\{4, 2, 2\}, -\dfrac{1663}{1\,362\,493\,440}\right\}, \left\{\{5, -1, -1\}, -\dfrac{1487}{24\,524\,881\,920}\right\}, \left\{\{5, -1, 1\}, -\dfrac{2153}{4\,904\,976\,384}\right\},$

$\left\{\{5, 1, -1\}, -\dfrac{2153}{4\,904\,976\,384}\right\}, \left\{\{5, 1, 1\}, -\dfrac{1829}{875\,888\,640}\right\}, \left\{\{6, 0, 0\}, -\dfrac{25}{4\,904\,976\,384}\right\}\right\}$

DdQQ2

$\left\{\left\{\{-6, 0, 0\}, -\dfrac{25}{4\,904\,976\,384}\right\}, \left\{\{-5, -1, -1\}, -\dfrac{2153}{4\,904\,976\,384}\right\},\right.$

$\left\{\{-5, -1, 1\}, -\dfrac{1829}{875\,888\,640}\right\}, \left\{\{-5, 1, -1\}, -\dfrac{1487}{24\,524\,881\,920}\right\}, \left\{\{-5, 1, 1\}, -\dfrac{2153}{4\,904\,976\,384}\right\},$

$\left\{\{-4, -2, -2\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-4, -2, 0\}, -\dfrac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{-4, -2, 2\}, -\dfrac{1663}{1\,362\,493\,440}\right\},$

$\left\{\{-4, 0, -2\}, -\dfrac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{-4, 0, 0\}, -\dfrac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{-4, 0, 2\}, -\dfrac{264\,307}{6\,131\,220\,480}\right\},$

$\left\{\{-4, 2, -2\}, -\dfrac{1007}{24\,524\,881\,920}\right\}, \left\{\{-4, 2, 0\}, -\dfrac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{-4, 2, 2\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\},$

$\left\{\{-3, -3, -3\}, -\dfrac{487}{4\,904\,976\,384}\right\}, \left\{\{-3, -3, -1\}, -\dfrac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-3, -3, 1\}, -\dfrac{21\,773}{4\,087\,480\,320}\right\},$

$\left\{\{-3, -3, 3\}, \dfrac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{-3, -1, -3\}, -\dfrac{6943}{908\,328\,960}\right\}, \left\{\{-3, -1, -1\}, -\dfrac{81\,959}{35\,389\,440}\right\},$

$\left\{\{-3, -1, 1\}, -\dfrac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{-3, -1, 3\}, -\dfrac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{-3, 1, -3\}, -\dfrac{21\,001}{8\,174\,960\,640}\right\},$

$\left\{\{-3, 1, -1\}, -\dfrac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{-3, 1, 1\}, -\dfrac{81\,959}{35\,389\,440}\right\}, \left\{\{-3, 1, 3\}, -\dfrac{294\,541}{6\,131\,220\,480}\right\},$

$\left\{\{-3, 3, -3\}, -\dfrac{1}{1\,167\,851\,520}\right\}, \left\{\{-3, 3, -1\}, -\dfrac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{-3, 3, 1\}, -\dfrac{6943}{908\,328\,960}\right\},$

$\left\{\{-3, 3, 3\}, -\dfrac{487}{4\,904\,976\,384}\right\}, \left\{\{-2, -4, -2\}, -\dfrac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{-2, -4, 0\}, \dfrac{21\,773}{4\,087\,480\,320}\right\},$

$\left\{\{-2, -4, 2\}, \dfrac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-2, -4, 4\}, \dfrac{487}{4\,904\,976\,384}\right\}, \left\{\{-2, -2, -4\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\},$

$\left\{\{-2, -2, -2\}, -\dfrac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{-2, -2, 0\}, -\dfrac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{-2, -2, 2\}, \dfrac{19\,866\,733}{12\,262\,440\,960}\right\},$

$\left\{\{-2, -2, 4\}, \dfrac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-2, 0, -4\}, -\dfrac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{-2, 0, -2\}, -\dfrac{46\,791\,673}{8\,174\,960\,640}\right\},$

$$\left\{\{-2, 0, 0\}, -\frac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{-2, 0, 2\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{-2, 0, 4\}, \frac{21\,773}{4\,087\,480\,320}\right\},$$

$$\left\{\{-2, 2, -4\}, -\frac{1007}{24\,524\,881\,920}\right\}, \left\{\{-2, 2, -2\}, -\frac{3\,451\,487}{8\,174\,960\,640}\right\}, \left\{\{-2, 2, 0\}, -\frac{46\,791\,673}{8\,174\,960\,640}\right\},$$

$$\left\{\{-2, 2, 2\}, -\frac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{-2, 2, 4\}, -\frac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{-2, 4, -2\}, -\frac{1007}{24\,524\,881\,920}\right\},$$

$$\left\{\{-2, 4, 0\}, -\frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{-2, 4, 2\}, -\frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-1, -5, -1\}, \frac{1663}{1\,362\,493\,440}\right\},$$

$$\left\{\{-1, -5, 1\}, \frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{-1, -5, 3\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-1, -3, -3\}, -\frac{294\,541}{6\,131\,220\,480}\right\},$$

$$\left\{\{-1, -3, -1\}, -\frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{-1, -3, 1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{-1, -3, 3\}, \frac{34\,402\,589}{24\,524\,881\,920}\right\},$$

$$\left\{\{-1, -3, 5\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-1, -1, -5\}, -\frac{2153}{4\,904\,976\,384}\right\}, \left\{\{-1, -1, -3\}, -\frac{81\,959}{35\,389\,440}\right\},$$

$$\left\{\{-1, -1, -1\}, -\frac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{-1, -1, 1\}, -\frac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{-1, -1, 3\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{-1, -1, 5\}, \frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{-1, 1, -5\}, -\frac{1487}{24\,524\,881\,920}\right\}, \left\{\{-1, 1, -3\}, -\frac{31\,775\,213}{24\,524\,881\,920}\right\},$$

$$\left\{\{-1, 1, -1\}, -\frac{382\,327\,747}{8\,174\,960\,640}\right\}, \left\{\{-1, 1, 1\}, -\frac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{-1, 1, 3\}, -\frac{19\,866\,733}{12\,262\,440\,960}\right\},$$

$$\left\{\{-1, 1, 5\}, \frac{1663}{1\,362\,493\,440}\right\}, \left\{\{-1, 3, -3\}, -\frac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{-1, 3, -1\}, -\frac{31\,775\,213}{24\,524\,881\,920}\right\},$$

$$\left\{\{-1, 3, 1\}, -\frac{81\,959}{35\,389\,440}\right\}, \left\{\{-1, 3, 3\}, -\frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-1, 5, -1\}, -\frac{1487}{24\,524\,881\,920}\right\},$$

$$\left\{\{-1, 5, 1\}, -\frac{2153}{4\,904\,976\,384}\right\}, \left\{\{0, -6, 0\}, \frac{1829}{875\,888\,640}\right\}, \left\{\{0, -6, 2\}, \frac{2153}{4\,904\,976\,384}\right\},$$

$$\left\{\{0, -4, -2\}, \frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{0, -4, 0\}, \frac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{0, -4, 2\}, \frac{81\,959}{35\,389\,440}\right\},$$

$$\left\{\{0, -4, 4\}, \frac{6943}{908\,328\,960}\right\}, \left\{\{0, -2, -4\}, -\frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{0, -2, -2\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{0, -2, 0\}, \frac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{0, -2, 2\}, \frac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{0, -2, 4\}, \frac{81\,959}{35\,389\,440}\right\},$$

$$\left\{\{0, -2, 6\}, \frac{2153}{4\,904\,976\,384}\right\}, \left\{\{0, 0, -6\}, -\frac{25}{4\,904\,976\,384}\right\}, \left\{\{0, 0, -4\}, -\frac{8\,221\,823}{24\,524\,881\,920}\right\},$$

$$\left\{\{0, 0, -2\}, -\frac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{0, 0, 0\}, -\frac{139\,391\,293}{1\,167\,851\,520}\right\}, \left\{\{0, 0, 2\}, \frac{4\,219\,589}{222\,953\,472}\right\},$$

$$\left\{\{0, 0, 4\}, \frac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{0, 0, 6\}, \frac{1829}{875\,888\,640}\right\}, \left\{\{0, 2, -4\}, -\frac{35\,267}{8\,174\,960\,640}\right\},$$

$$\left\{\{0, 2, -2\}, -\frac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{0, 2, 0\}, -\frac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{0, 2, 2\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{0, 2, 4\}, \frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{0, 4, -2\}, -\frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{0, 4, 0\}, -\frac{8\,221\,823}{24\,524\,881\,920}\right\},$$

$$\left\{\{0, 4, 2\}, -\frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{0, 6, 0\}, -\frac{25}{4\,904\,976\,384}\right\}, \left\{\{1, -7, 1\}, \frac{25}{4\,904\,976\,384}\right\},$$

$$\left\{\{1, -5, -1\}, \frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{1, -5, 1\}, \frac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{1, -5, 3\}, \frac{35\,267}{8\,174\,960\,640}\right\},$$

$$\left\{\{1, -3, -3\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{1, -3, -1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{1, -3, 1\}, \frac{102\,820\,547}{2\,724\,986\,880}\right\},$$

$$\left\{\{1, -3, 3\}, \frac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{1, -3, 5\}, \frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{1, -1, -5\}, -\frac{1829}{875\,888\,640}\right\},$$

$$\left\{\{1, -1, -3\}, -\frac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{1, -1, -1\}, -\frac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{1, -1, 1\}, \frac{139\,391\,293}{1\,167\,851\,520}\right\},$$

$$\left\{\{1, -1, 3\}, \frac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{1, -1, 5\}, \frac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{1, -1, 7\}, \frac{25}{4\,904\,976\,384}\right\},$$

$$\left\{\{1, 1, -5\}, -\frac{2153}{4\,904\,976\,384}\right\}, \left\{\{1, 1, -3\}, -\frac{81\,959}{35\,389\,440}\right\}, \left\{\{1, 1, -1\}, -\frac{1\,280\,877\,911}{24\,524\,881\,920}\right\},$$

$$\left\{\{1, 1, 1\}, -\frac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{1, 1, 3\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{1, 1, 5\}, \frac{264\,307}{6\,131\,220\,480}\right\},$$

$$\left\{\{1, 3, -3\}, -\frac{6943}{908\,328\,960}\right\}, \left\{\{1, 3, -1\}, -\frac{81\,959}{35\,389\,440}\right\}, \left\{\{1, 3, 1\}, -\frac{11\,016\,701}{4\,087\,480\,320}\right\},$$

$$\left\{\{1, 3, 3\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{1, 5, -1\}, -\frac{2153}{4\,904\,976\,384}\right\}, \left\{\{1, 5, 1\}, -\frac{1829}{875\,888\,640}\right\},$$

$$\left\{\{2, -6, 0\}, \frac{2153}{4\,904\,976\,384}\right\}, \left\{\{2, -6, 2\}, \frac{1487}{24\,524\,881\,920}\right\}, \left\{\{2, -4, -2\}, \frac{294\,541}{6\,131\,220\,480}\right\},$$

$$\left\{\{2, -4, 0\}, \frac{81\,959}{35\,389\,440}\right\}, \left\{\{2, -4, 2\}, \frac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{2, -4, 4\}, \frac{21\,001}{8\,174\,960\,640}\right\},$$

$$\left\{\{2, -2, -4\}, -\frac{1663}{1\,362\,493\,440}\right\}, \left\{\{2, -2, -2\}, \frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{2, -2, 0\}, \frac{1\,280\,877\,911}{24\,524\,881\,920}\right\},$$

$$\left\{\{2, -2, 2\}, \frac{382\,327\,747}{8\,174\,960\,640}\right\}, \left\{\{2, -2, 4\}, \frac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{2, -2, 6\}, \frac{1487}{24\,524\,881\,920}\right\},$$

$$\left\{\{2, 0, -4\}, -\frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{2, 0, -2\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{2, 0, 0\}, \frac{4\,219\,589}{222\,953\,472}\right\},$$

$$\left\{\{2, 0, 2\}, \frac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{2, 0, 4\}, \frac{81\,959}{35\,389\,440}\right\}, \left\{\{2, 0, 6\}, \frac{2153}{4\,904\,976\,384}\right\},$$

$$\left\{\{2, 2, -4\}, -\frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{2, 2, -2\}, -\frac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{2, 2, 0\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{2, 2, 2\}, \frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{2, 2, 4\}, \frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{2, 4, -2\}, -\frac{20\,467}{24\,524\,881\,920}\right\},$$

$$\left\{\{2, 4, 0\}, -\frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{2, 4, 2\}, -\frac{1663}{1\,362\,493\,440}\right\}, \left\{\{3, -5, -1\}, \frac{20\,467}{24\,524\,881\,920}\right\},$$

$$\left\{\{3, -5, 1\}, \frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{3, -5, 3\}, \frac{1007}{24\,524\,881\,920}\right\}, \left\{\{3, -3, -3\}, \frac{19\,709}{6\,131\,220\,480}\right\},$$

$$\left\{\{3, -3, -1\}, \frac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{3, -3, 1\}, \frac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{3, -3, 3\}, \frac{3\,451\,487}{8\,174\,960\,640}\right\},$$

$$\left\{\{3, -3, 5\}, \frac{1007}{24\,524\,881\,920}\right\}, \left\{\{3, -1, -3\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{3, -1, -1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{3, -1, 1\}, \frac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{3, -1, 3\}, \frac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{3, -1, 5\}, \frac{35\,267}{8\,174\,960\,640}\right\},$$

$$\left\{\{3, 1, -3\}, -\frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{3, 1, -1\}, -\frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{3, 1, 1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{3, 1, 3\}, \frac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{3, 1, 5\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{3, 3, -3\}, -\frac{487}{4\,904\,976\,384}\right\},$$

$$\left\{\{3, 3, -1\}, -\frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{3, 3, 1\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{3, 3, 3\}, \frac{19\,709}{6\,131\,220\,480}\right\},$$

$$\left\{\{4, -4, -2\}, \frac{487}{4\,904\,976\,384}\right\}, \left\{\{4, -4, 0\}, \frac{6943}{908\,328\,960}\right\}, \left\{\{4, -4, 2\}, \frac{21\,001}{8\,174\,960\,640}\right\},$$

$$\left\{\{4, -4, 4\}, \frac{1}{1\,167\,851\,520}\right\}, \left\{\{4, -2, -2\}, \frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{4, -2, 0\}, \frac{81\,959}{35\,389\,440}\right\},$$

$$\left\{\{4, -2, 2\}, \frac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{4, -2, 4\}, \frac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{4, 0, -2\}, \frac{21\,773}{4\,087\,480\,320}\right\},$$

$$\left\{\{4, 0, 0\}, \frac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{4, 0, 2\}, \frac{81\,959}{35\,389\,440}\right\}, \left\{\{4, 0, 4\}, \frac{6943}{908\,328\,960}\right\},$$

$$\left\{\{4, 2, -2\}, -\frac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{4, 2, 0\}, \frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{4, 2, 2\}, \frac{294\,541}{6\,131\,220\,480}\right\},$$

$$\left\{\{4, 2, 4\}, \frac{487}{4\,904\,976\,384}\right\}, \left\{\{5, -3, -1\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{5, -3, 1\}, \frac{35\,267}{8\,174\,960\,640}\right\},$$

$$\left\{\{5, -3, 3\}, \frac{1007}{24\,524\,881\,920}\right\}, \left\{\{5, -1, -1\}, \frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{5, -1, 1\}, \frac{8\,221\,823}{24\,524\,881\,920}\right\},$$

$\left\{\{5, -1, 3\}, \dfrac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{5, 1, -1\}, \dfrac{1663}{1\,362\,493\,440}\right\}, \left\{\{5, 1, 1\}, \dfrac{264\,307}{6\,131\,220\,480}\right\},$

$\left\{\{5, 1, 3\}, \dfrac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{6, -2, 0\}, \dfrac{2153}{4\,904\,976\,384}\right\}, \left\{\{6, -2, 2\}, \dfrac{1487}{24\,524\,881\,920}\right\},$

$\left\{\{6, 0, 0\}, \dfrac{1829}{875\,888\,640}\right\}, \left\{\{6, 0, 2\}, \dfrac{2153}{4\,904\,976\,384}\right\}, \left\{\{7, -1, 1\}, \dfrac{25}{4\,904\,976\,384}\right\}\right\}$

DdQQ3

$\left\{\left\{\{-6, 0, 0\}, -\dfrac{25}{4\,904\,976\,384}\right\}, \left\{\{-5, -1, -1\}, -\dfrac{2153}{4\,904\,976\,384}\right\},\right.$

$\left\{\{-5, -1, 1\}, -\dfrac{1487}{24\,524\,881\,920}\right\}, \left\{\{-5, 1, -1\}, -\dfrac{1829}{875\,888\,640}\right\}, \left\{\{-5, 1, 1\}, -\dfrac{2153}{4\,904\,976\,384}\right\},$

$\left\{\{-4, -2, -2\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-4, -2, 0\}, -\dfrac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{-4, -2, 2\}, -\dfrac{1007}{24\,524\,881\,920}\right\},$

$\left\{\{-4, 0, -2\}, -\dfrac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{-4, 0, 0\}, -\dfrac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{-4, 0, 2\}, -\dfrac{35\,267}{8\,174\,960\,640}\right\},$

$\left\{\{-4, 2, -2\}, -\dfrac{1663}{1\,362\,493\,440}\right\}, \left\{\{-4, 2, 0\}, -\dfrac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{-4, 2, 2\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\},$

$\left\{\{-3, -3, -3\}, -\dfrac{487}{4\,904\,976\,384}\right\}, \left\{\{-3, -3, -1\}, -\dfrac{6943}{908\,328\,960}\right\}, \left\{\{-3, -3, 1\}, -\dfrac{21\,001}{8\,174\,960\,640}\right\},$

$\left\{\{-3, -3, 3\}, -\dfrac{1}{1\,167\,851\,520}\right\}, \left\{\{-3, -1, -3\}, -\dfrac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-3, -1, -1\}, -\dfrac{81\,959}{35\,389\,440}\right\},$

$\left\{\{-3, -1, 1\}, -\dfrac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{-3, -1, 3\}, -\dfrac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{-3, 1, -3\}, -\dfrac{21\,773}{4\,087\,480\,320}\right\},$

$\left\{\{-3, 1, -1\}, -\dfrac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{-3, 1, 1\}, -\dfrac{81\,959}{35\,389\,440}\right\}, \left\{\{-3, 1, 3\}, -\dfrac{6943}{908\,328\,960}\right\},$

$\left\{\{-3, 3, -3\}, \dfrac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{-3, 3, -1\}, -\dfrac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{-3, 3, 1\}, -\dfrac{294\,541}{6\,131\,220\,480}\right\},$

$\left\{\{-3, 3, 3\}, -\dfrac{487}{4\,904\,976\,384}\right\}, \left\{\{-2, -4, -2\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-2, -4, 0\}, -\dfrac{35\,267}{8\,174\,960\,640}\right\},$

$\left\{\{-2, -4, 2\}, -\dfrac{1007}{24\,524\,881\,920}\right\}, \left\{\{-2, -2, -4\}, -\dfrac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{-2, -2, -2\}, -\dfrac{34\,402\,589}{24\,524\,881\,920}\right\},$

$\left\{\{-2, -2, 0\}, -\dfrac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{-2, -2, 2\}, -\dfrac{3\,451\,487}{8\,174\,960\,640}\right\}, \left\{\{-2, -2, 4\}, -\dfrac{1007}{24\,524\,881\,920}\right\},$

$\left\{\{-2, 0, -4\}, \dfrac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{-2, 0, -2\}, -\dfrac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{-2, 0, 0\}, -\dfrac{102\,820\,547}{2\,724\,986\,880}\right\},$

$\left\{\{-2, 0, 2\}, -\dfrac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{-2, 0, 4\}, -\dfrac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{-2, 2, -4\}, \dfrac{294\,541}{6\,131\,220\,480}\right\},$

$\left\{\{-2, 2, -2\}, \dfrac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{-2, 2, 0\}, -\dfrac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{-2, 2, 2\}, -\dfrac{34\,402\,589}{24\,524\,881\,920}\right\},$

$\left\{\{-2, 2, 4\}, -\dfrac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-2, 4, -4\}, \dfrac{487}{4\,904\,976\,384}\right\}, \left\{\{-2, 4, -2\}, \dfrac{294\,541}{6\,131\,220\,480}\right\},$

$\left\{\{-2, 4, 0\}, \dfrac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{-2, 4, 2\}, -\dfrac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{-1, -5, -1\}, -\dfrac{2153}{4\,904\,976\,384}\right\},$

$\left\{\{-1, -5, 1\}, -\dfrac{1487}{24\,524\,881\,920}\right\}, \left\{\{-1, -3, -3\}, -\dfrac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-1, -3, -1\}, -\dfrac{81\,959}{35\,389\,440}\right\},$

$\left\{\{-1, -3, 1\}, -\dfrac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{-1, -3, 3\}, -\dfrac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{-1, -1, -5\}, \dfrac{1663}{1\,362\,493\,440}\right\},$

$\left\{\{-1, -1, -3\}, -\dfrac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{-1, -1, -1\}, -\dfrac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{-1, -1, 1\}, -\dfrac{382\,327\,747}{8\,174\,960\,640}\right\},$

$\left\{\{-1, -1, 3\}, -\dfrac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{-1, -1, 5\}, -\dfrac{1487}{24\,524\,881\,920}\right\}, \left\{\{-1, 1, -5\}, \dfrac{264\,307}{6\,131\,220\,480}\right\},$

$\left\{\{-1, 1, -3\}, \dfrac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{-1, 1, -1\}, -\dfrac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{-1, 1, 1\}, -\dfrac{1\,280\,877\,911}{24\,524\,881\,920}\right\},$

$\left\{\{-1, 1, 3\}, -\dfrac{81\,959}{35\,389\,440}\right\}, \left\{\{-1, 1, 5\}, -\dfrac{2153}{4\,904\,976\,384}\right\}, \left\{\{-1, 3, -5\}, \dfrac{20\,467}{24\,524\,881\,920}\right\},$

$\left\{\{-1, 3, -3\}, \dfrac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{-1, 3, -1\}, \dfrac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{-1, 3, 1\}, -\dfrac{19\,866\,733}{12\,262\,440\,960}\right\},$

$\left\{\{-1, 3, 3\}, -\dfrac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{-1, 5, -3\}, \dfrac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{-1, 5, -1\}, \dfrac{264\,307}{6\,131\,220\,480}\right\},$

$\left\{\{-1, 5, 1\}, \dfrac{1663}{1\,362\,493\,440}\right\}, \left\{\{0, -6, 0\}, -\dfrac{25}{4\,904\,976\,384}\right\}, \left\{\{0, -4, -2\}, -\dfrac{264\,307}{6\,131\,220\,480}\right\},$

$\left\{\{0, -4, 0\}, -\dfrac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{0, -4, 2\}, -\dfrac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{0, -2, -4\}, \dfrac{21\,773}{4\,087\,480\,320}\right\},$

$\left\{\{0, -2, -2\}, -\dfrac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{0, -2, 0\}, -\dfrac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{0, -2, 2\}, -\dfrac{46\,791\,673}{8\,174\,960\,640}\right\},$

$\left\{\{0, -2, 4\}, -\dfrac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{0, 0, -6\}, \dfrac{1829}{875\,888\,640}\right\}, \left\{\{0, 0, -4\}, \dfrac{11\,016\,701}{4\,087\,480\,320}\right\},$

$\left\{\{0, 0, -2\}, \dfrac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{0, 0, 0\}, -\dfrac{139\,391\,293}{1\,167\,851\,520}\right\}, \left\{\{0, 0, 2\}, -\dfrac{102\,820\,547}{2\,724\,986\,880}\right\},$

$\left\{\{0, 0, 4\}, -\dfrac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{0, 0, 6\}, -\dfrac{25}{4\,904\,976\,384}\right\}, \left\{\{0, 2, -6\}, \dfrac{2153}{4\,904\,976\,384}\right\},$

$$\left\{\{0, 2, -4\}, \frac{81\,959}{35\,389\,440}\right\}, \left\{\{0, 2, -2\}, \frac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{0, 2, 0\}, \frac{4\,219\,589}{222\,953\,472}\right\},$$

$$\left\{\{0, 2, 2\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{0, 2, 4\}, -\frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{0, 4, -4\}, \frac{6943}{908\,328\,960}\right\},$$

$$\left\{\{0, 4, -2\}, \frac{81\,959}{35\,389\,440}\right\}, \left\{\{0, 4, 0\}, \frac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{0, 4, 2\}, \frac{21\,773}{4\,087\,480\,320}\right\},$$

$$\left\{\{0, 6, -2\}, \frac{2153}{4\,904\,976\,384}\right\}, \left\{\{0, 6, 0\}, \frac{1829}{875\,888\,640}\right\}, \left\{\{1, -5, -1\}, -\frac{1829}{875\,888\,640}\right\},$$

$$\left\{\{1, -5, 1\}, -\frac{2153}{4\,904\,976\,384}\right\}, \left\{\{1, -3, -3\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{1, -3, -1\}, -\frac{11\,016\,701}{4\,087\,480\,320}\right\},$$

$$\left\{\{1, -3, 1\}, -\frac{81\,959}{35\,389\,440}\right\}, \left\{\{1, -3, 3\}, -\frac{6943}{908\,328\,960}\right\}, \left\{\{1, -1, -5\}, \frac{264\,307}{6\,131\,220\,480}\right\},$$

$$\left\{\{1, -1, -3\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{1, -1, -1\}, -\frac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{1, -1, 1\}, -\frac{1\,280\,877\,911}{24\,524\,881\,920}\right\},$$

$$\left\{\{1, -1, 3\}, -\frac{81\,959}{35\,389\,440}\right\}, \left\{\{1, -1, 5\}, -\frac{2153}{4\,904\,976\,384}\right\}, \left\{\{1, 1, -7\}, \frac{25}{4\,904\,976\,384}\right\},$$

$$\left\{\{1, 1, -5\}, \frac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{1, 1, -3\}, \frac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{1, 1, -1\}, \frac{139\,391\,293}{1\,167\,851\,520}\right\},$$

$$\left\{\{1, 1, 1\}, -\frac{4\,219\,589}{222\,953\,472}\right\}, \left\{\{1, 1, 3\}, -\frac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{1, 1, 5\}, -\frac{1829}{875\,888\,640}\right\},$$

$$\left\{\{1, 3, -5\}, \frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{1, 3, -3\}, \frac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{1, 3, -1\}, \frac{102\,820\,547}{2\,724\,986\,880}\right\},$$

$$\left\{\{1, 3, 1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{1, 3, 3\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{1, 5, -3\}, \frac{35\,267}{8\,174\,960\,640}\right\},$$

$$\left\{\{1, 5, -1\}, \frac{8\,221\,823}{24\,524\,881\,920}\right\}, \left\{\{1, 5, 1\}, \frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{1, 7, -1\}, \frac{25}{4\,904\,976\,384}\right\},$$

$$\left\{\{2, -4, -2\}, -\frac{1663}{1\,362\,493\,440}\right\}, \left\{\{2, -4, 0\}, -\frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{2, -4, 2\}, -\frac{20\,467}{24\,524\,881\,920}\right\},$$

$$\left\{\{2, -2, -4\}, \frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{2, -2, -2\}, \frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{2, -2, 0\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{2, -2, 2\}, -\frac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{2, -2, 4\}, -\frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{2, 0, -6\}, \frac{2153}{4\,904\,976\,384}\right\},$$

$$\left\{\{2, 0, -4\}, \frac{81\,959}{35\,389\,440}\right\}, \left\{\{2, 0, -2\}, \frac{1\,280\,877\,911}{24\,524\,881\,920}\right\}, \left\{\{2, 0, 0\}, \frac{4\,219\,589}{222\,953\,472}\right\},$$

$$\left\{\{2, 0, 2\}, -\frac{28\,959\,439}{4\,087\,480\,320}\right\}, \left\{\{2, 0, 4\}, -\frac{264\,307}{6\,131\,220\,480}\right\}, \left\{\{2, 2, -6\}, \frac{1487}{24\,524\,881\,920}\right\},$$

$$\left\{\{2, 2, -4\}, \frac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{2, 2, -2\}, \frac{382\,327\,747}{8\,174\,960\,640}\right\}, \left\{\{2, 2, 0\}, \frac{1\,280\,877\,911}{24\,524\,881\,920}\right\},$$

$$\left\{\{2, 2, 2\}, \frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{2, 2, 4\}, -\frac{1663}{1\,362\,493\,440}\right\}, \left\{\{2, 4, -4\}, \frac{21\,001}{8\,174\,960\,640}\right\},$$

$$\left\{\{2, 4, -2\}, \frac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{2, 4, 0\}, \frac{81\,959}{35\,389\,440}\right\}, \left\{\{2, 4, 2\}, \frac{294\,541}{6\,131\,220\,480}\right\},$$

$$\left\{\{2, 6, -2\}, \frac{1487}{24\,524\,881\,920}\right\}, \left\{\{2, 6, 0\}, \frac{2153}{4\,904\,976\,384}\right\}, \left\{\{3, -3, -3\}, \frac{19\,709}{6\,131\,220\,480}\right\},$$

$$\left\{\{3, -3, -1\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{3, -3, 1\}, -\frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{3, -3, 3\}, -\frac{487}{4\,904\,976\,384}\right\},$$

$$\left\{\{3, -1, -5\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{3, -1, -3\}, \frac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{3, -1, -1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{3, -1, 1\}, -\frac{19\,866\,733}{12\,262\,440\,960}\right\}, \left\{\{3, -1, 3\}, -\frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{3, 1, -5\}, \frac{35\,267}{8\,174\,960\,640}\right\},$$

$$\left\{\{3, 1, -3\}, \frac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{3, 1, -1\}, \frac{102\,820\,547}{2\,724\,986\,880}\right\}, \left\{\{3, 1, 1\}, \frac{28\,959\,439}{4\,087\,480\,320}\right\},$$

$$\left\{\{3, 1, 3\}, -\frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{3, 3, -5\}, \frac{1007}{24\,524\,881\,920}\right\}, \left\{\{3, 3, -3\}, \frac{3\,451\,487}{8\,174\,960\,640}\right\},$$

$$\left\{\{3, 3, -1\}, \frac{46\,791\,673}{8\,174\,960\,640}\right\}, \left\{\{3, 3, 1\}, \frac{34\,402\,589}{24\,524\,881\,920}\right\}, \left\{\{3, 3, 3\}, \frac{19\,709}{6\,131\,220\,480}\right\},$$

$$\left\{\{3, 5, -3\}, \frac{1007}{24\,524\,881\,920}\right\}, \left\{\{3, 5, -1\}, \frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{3, 5, 1\}, \frac{20\,467}{24\,524\,881\,920}\right\},$$

$$\left\{\{4, -2, -4\}, \frac{487}{4\,904\,976\,384}\right\}, \left\{\{4, -2, -2\}, \frac{294\,541}{6\,131\,220\,480}\right\}, \left\{\{4, -2, 0\}, \frac{21\,773}{4\,087\,480\,320}\right\},$$

$$\left\{\{4, -2, 2\}, -\frac{19\,709}{6\,131\,220\,480}\right\}, \left\{\{4, 0, -4\}, \frac{6943}{908\,328\,960}\right\}, \left\{\{4, 0, -2\}, \frac{81\,959}{35\,389\,440}\right\},$$

$$\left\{\{4, 0, 0\}, \frac{11\,016\,701}{4\,087\,480\,320}\right\}, \left\{\{4, 0, 2\}, \frac{21\,773}{4\,087\,480\,320}\right\}, \left\{\{4, 2, -4\}, \frac{21\,001}{8\,174\,960\,640}\right\},$$

$$\left\{\{4, 2, -2\}, \frac{31\,775\,213}{24\,524\,881\,920}\right\}, \left\{\{4, 2, 0\}, \frac{81\,959}{35\,389\,440}\right\}, \left\{\{4, 2, 2\}, \frac{294\,541}{6\,131\,220\,480}\right\},$$

$$\left\{\{4, 4, -4\}, \frac{1}{1\,167\,851\,520}\right\}, \left\{\{4, 4, -2\}, \frac{21\,001}{8\,174\,960\,640}\right\}, \left\{\{4, 4, 0\}, \frac{6943}{908\,328\,960}\right\},$$

$$\left\{\{4, 4, 2\}, \frac{487}{4\,904\,976\,384}\right\}, \left\{\{5, -1, -3\}, \frac{20\,467}{24\,524\,881\,920}\right\}, \left\{\{5, -1, -1\}, \frac{264\,307}{6\,131\,220\,480}\right\},$$

$$\left\{\{5, -1, 1\}, \frac{1663}{1\,362\,493\,440}\right\}, \left\{\{5, 1, -3\}, \frac{35\,267}{8\,174\,960\,640}\right\}, \left\{\{5, 1, -1\}, \frac{8\,221\,823}{24\,524\,881\,920}\right\},$$

$$\left\{ \{5, 1, 1\}, \frac{264\,307}{6\,131\,220\,480} \right\}, \left\{ \{5, 3, -3\}, \frac{1007}{24\,524\,881\,920} \right\}, \left\{ \{5, 3, -1\}, \frac{35\,267}{8\,174\,960\,640} \right\},$$

$$\left\{ \{5, 3, 1\}, \frac{20\,467}{24\,524\,881\,920} \right\}, \left\{ \{6, 0, -2\}, \frac{2153}{4\,904\,976\,384} \right\}, \left\{ \{6, 0, 0\}, \frac{1829}{875\,888\,640} \right\},$$

$$\left\{ \{6, 2, -2\}, \frac{1487}{24\,524\,881\,920} \right\}, \left\{ \{6, 2, 0\}, \frac{2153}{4\,904\,976\,384} \right\}, \left\{ \{7, 1, -1\}, \frac{25}{4\,904\,976\,384} \right\} \right\}$$