Pensieve header: R and P to $k=15.

```
In[•]:= Block[{$k = 15}, {
  R → CF /@ R_{i,j}, P → P_{i,j}
 }] // Column
```

$$R \to \mathbb{E}_{\{\}\to\{i,j\}}\Big[\hbar\, a_j\, b_i,\ \hbar\, x_j\, y_i,\ 1 - \frac{1}{4}\left(\gamma\,\hbar^3\, x_j^2\, y_i^2\right)\epsilon + \frac{1}{288}\left(32\,\gamma^2\,\hbar^5\, x_j^3\, y_i^3 + 9\,\gamma^2\,\hbar^6\, x_j^4\, y_i^4\right)\epsilon^2 +$$
$$\frac{1}{1152}\left(24\,\gamma^3\,\hbar^5\, x_j^2\, y_i^2 - 72\,\gamma^3\,\hbar^7\, x_j^4\, y_i^4 - 32\,\gamma^3\,\hbar^8\, x_j^5\, y_i^5 - 3\,\gamma^3\,\hbar^9\, x_j^6\, y_i^6\right)\epsilon^3 +$$
$$\frac{1}{4\,147\,200}\left(-115\,200\,\gamma^4\,\hbar^7\, x_j^3\, y_i^3 - 21\,600\,\gamma^4\,\hbar^8\, x_j^4\, y_i^4 + 165\,888\,\gamma^4\,\hbar^9\, x_j^5\, y_i^5 +\right.$$
$$\left. 90\,400\,\gamma^4\,\hbar^{10}\, x_j^6\, y_i^6 + 14\,400\,\gamma^4\,\hbar^{11}\, x_j^7\, y_i^7 + 675\,\gamma^4\,\hbar^{12}\, x_j^8\, y_i^8\right)\epsilon^4 +$$
$$\frac{1}{16\,588\,800}\left(-34\,560\,\gamma^5\,\hbar^7\, x_j^2\, y_i^2 + 518\,400\,\gamma^5\,\hbar^9\, x_j^4\, y_i^4 + 153\,600\,\gamma^5\,\hbar^{10}\, x_j^5\, y_i^5 - 450\,000\,\gamma^5\,\hbar^{11}\, x_j^6\, y_i^6 -\right.$$
$$\left. 281\,088\,\gamma^5\,\hbar^{12}\, x_j^7\, y_i^7 - 58\,000\,\gamma^5\,\hbar^{13}\, x_j^8\, y_i^8 - 4800\,\gamma^5\,\hbar^{14}\, x_j^9\, y_i^9 - 135\,\gamma^5\,\hbar^{15}\, x_j^{10}\, y_i^{10}\right)\epsilon^5 +$$
$$\frac{1}{175\,575\,859\,200}\left(1\,137\,991\,680\,\gamma^6\,\hbar^9\, x_j^3\, y_i^3 + 129\,548\,160\,\gamma^6\,\hbar^{10}\, x_j^4\, y_i^4 - 5\,852\,528\,640\,\gamma^6\,\hbar^{11}\, x_j^5\, y_i^5 -\right.$$
$$2\,142\,201\,600\,\gamma^6\,\hbar^{12}\, x_j^6\, y_i^6 + 3\,329\,164\,800\,\gamma^6\,\hbar^{13}\, x_j^7\, y_i^7 + 2\,333\,009\,952\,\gamma^6\,\hbar^{14}\, x_j^8\, y_i^8 + 564\,429\,824$$
$$\left.\gamma^6\,\hbar^{15}\, x_j^9\, y_i^9 + 62\,445\,600\,\gamma^6\,\hbar^{16}\, x_j^{10}\, y_i^{10} + 3\,175\,200\,\gamma^6\,\hbar^{17}\, x_j^{11}\, y_i^{11} + 59\,535\,\gamma^6\,\hbar^{18}\, x_j^{12}\, y_i^{12}\right)\epsilon^6 +$$
$$\frac{1}{702\,303\,436\,800}\left(148\,055\,040\,\gamma^7\,\hbar^9\, x_j^2\, y_i^2 - 9\,327\,467\,520\,\gamma^7\,\hbar^{11}\, x_j^4\, y_i^4 - 1\,706\,987\,520\,\gamma^7\,\hbar^{12}\, x_j^5\, y_i^5 +\right.$$
$$24\,301\,710\,720\,\gamma^7\,\hbar^{13}\, x_j^6\, y_i^6 + 10\,095\,611\,904\,\gamma^7\,\hbar^{14}\, x_j^7\, y_i^7 - 9\,426\,816\,000\,\gamma^7\,\hbar^{15}\, x_j^8\, y_i^8 -$$
$$7\,404\,936\,192\,\gamma^7\,\hbar^{16}\, x_j^9\, y_i^9 - 2\,001\,466\,152\,\gamma^7\,\hbar^{17}\, x_j^{10}\, y_i^{10} - 265\,707\,008\,\gamma^7\,\hbar^{18}\, x_j^{11}\, y_i^{11} -$$
$$\left.18\,433\,800\,\gamma^7\,\hbar^{19}\, x_j^{12}\, y_i^{12} - 635\,040\,\gamma^7\,\hbar^{20}\, x_j^{13}\, y_i^{13} - 8505\,\gamma^7\,\hbar^{21}\, x_j^{14}\, y_i^{14}\right)\epsilon^7 +$$
$$\frac{1}{5\,056\,584\,744\,960\,000}\left(-7\,515\,389\,952\,000\,\gamma^8\,\hbar^{11}\, x_j^3\, y_i^3 - 485\,968\,896\,000\,\gamma^8\,\hbar^{12}\, x_j^4\, y_i^4 +\right.$$
$$113\,773\,156\,761\,600\,\gamma^8\,\hbar^{13}\, x_j^5\, y_i^5 + 26\,332\,314\,624\,000\,\gamma^8\,\hbar^{14}\, x_j^6\, y_i^6 - 178\,421\,999\,616\,000\,\gamma^8\,\hbar^{15}\, x_j^7\, y_i^7 -$$
$$80\,981\,164\,454\,400\,\gamma^8\,\hbar^{16}\, x_j^8\, y_i^8 + 47\,923\,539\,148\,800\,\gamma^8\,\hbar^{17}\, x_j^9\, y_i^9 + 42\,774\,983\,635\,968\,\gamma^8\,\hbar^{18}\, x_j^{10}\, y_i^{10} +$$
$$12\,579\,459\,148\,800\,\gamma^8\,\hbar^{19}\, x_j^{11}\, y_i^{11} + 1\,895\,681\,972\,800\,\gamma^8\,\hbar^{20}\, x_j^{12}\, y_i^{12} + 160\,492\,953\,600\,\gamma^8\,\hbar^{21}\, x_j^{13}\, y_i^{13} +$$
$$\left.7\,652\,232\,000\,\gamma^8\,\hbar^{22}\, x_j^{14}\, y_i^{14} + 190\,512\,000\,\gamma^8\,\hbar^{23}\, x_j^{15}\, y_i^{15} + 1\,913\,625\,\gamma^8\,\hbar^{24}\, x_j^{16}\, y_i^{16}\right)\epsilon^8 +$$
$$\frac{1}{20\,226\,338\,979\,840\,000}\left(-431\,972\,352\,000\,\gamma^9\,\hbar^{11}\, x_j^2\, y_i^2 + 110\,152\,949\,760\,000\,\gamma^9\,\hbar^{13}\, x_j^4\, y_i^4 +\right.$$
$$11\,890\,851\,840\,000\,\gamma^9\,\hbar^{14}\, x_j^5\, y_i^5 - 690\,215\,178\,240\,000\,\gamma^9\,\hbar^{15}\, x_j^6\, y_i^6 - 185\,103\,775\,825\,920\,\gamma^9\,\hbar^{16}\, x_j^7\, y_i^7 +$$
$$717\,646\,003\,200\,000\,\gamma^9\,\hbar^{17}\, x_j^8\, y_i^8 + 349\,278\,112\,972\,800\,\gamma^9\,\hbar^{18}\, x_j^9\, y_i^9 - 132\,686\,578\,483\,200$$
$$\gamma^9\,\hbar^{19}\, x_j^{10}\, y_i^{10} - 138\,545\,276\,928\,000\,\gamma^9\,\hbar^{20}\, x_j^{11}\, y_i^{11} - 43\,660\,669\,690\,368\,\gamma^9\,\hbar^{21}\, x_j^{12}\, y_i^{12} -$$
$$7\,228\,689\,408\,000\,\gamma^9\,\hbar^{22}\, x_j^{13}\, y_i^{13} - 704\,248\,501\,600\,\gamma^9\,\hbar^{23}\, x_j^{14}\, y_i^{14} - 41\,487\,774\,720\,\gamma^9\,\hbar^{24}\, x_j^{15}\, y_i^{15} -$$
$$\left.1\,444\,716\,000\,\gamma^9\,\hbar^{25}\, x_j^{16}\, y_i^{16} - 27\,216\,000\,\gamma^9\,\hbar^{26}\, x_j^{17}\, y_i^{17} - 212\,625\,\gamma^9\,\hbar^{27}\, x_j^{18}\, y_i^{18}\right)\epsilon^9 +$$
$$\frac{1}{176\,211\,865\,192\,366\,080\,000}\left(59\,792\,643\,116\,236\,800\,\gamma^{10}\,\hbar^{13}\, x_j^3\, y_i^3 + 2\,097\,153\,309\,081\,600\,\gamma^{10}\,\hbar^{14}\, x_j^4\, y_i^4 -\right.$$
$$2\,551\,109\,609\,167\,257\,600\,\gamma^{10}\,\hbar^{15}\, x_j^5\, y_i^5 - 363\,288\,506\,499\,072\,000\,\gamma^{10}\,\hbar^{16}\, x_j^6\, y_i^6 +$$
$$8\,476\,303\,177\,875\,456\,000\,\gamma^{10}\,\hbar^{17}\, x_j^7\, y_i^7 + 2\,523\,070\,578\,376\,212\,480\,\gamma^{10}\,\hbar^{18}\, x_j^8\, y_i^8 -$$
$$6\,209\,305\,382\,344\,458\,240\,\gamma^{10}\,\hbar^{19}\, x_j^9\, y_i^9 - 3\,212\,200\,743\,909\,949\,440\,\gamma^{10}\,\hbar^{20}\, x_j^{10}\, y_i^{10} +$$
$$764\,478\,827\,664\,998\,400\,\gamma^{10}\,\hbar^{21}\, x_j^{11}\, y_i^{11} + 984\,376\,099\,927\,123\,200\,\gamma^{10}\,\hbar^{22}\, x_j^{12}\, y_i^{12} +$$
$$329\,542\,253\,658\,832\,896\,\gamma^{10}\,\hbar^{23}\, x_j^{13}\, y_i^{13} + 58\,711\,494\,754\,801\,152\,\gamma^{10}\,\hbar^{24}\, x_j^{14}\, y_i^{14} +$$
$$6\,352\,870\,599\,961\,600\,\gamma^{10}\,\hbar^{25}\, x_j^{15}\, y_i^{15} + 435\,283\,289\,179\,200\,\gamma^{10}\,\hbar^{26}\, x_j^{16}\, y_i^{16} +$$
$$18\,905\,469\,327\,360\,\gamma^{10}\,\hbar^{27}\, x_j^{17}\, y_i^{17} + 502\,203\,240\,000\,\gamma^{10}\,\hbar^{28}\, x_j^{18}\, y_i^{18} +$$
$$\left.7\,409\,556\,000\,\gamma^{10}\,\hbar^{29}\, x_j^{19}\, y_i^{19} + 46\,309\,725\,\gamma^{10}\,\hbar^{30}\, x_j^{20}\, y_i^{20}\right)\epsilon^{10} +$$
$$\frac{1}{704\,847\,460\,769\,464\,320\,000}\left(1\,525\,202\,406\,604\,800\,\gamma^{11}\,\hbar^{13}\, x_j^2\, y_i^2 - 1\,560\,282\,061\,956\,710\,400\,\gamma^{11}\,\hbar^{15}\, x_j^4\, y_i^4 -\right.$$
$$96\,935\,086\,286\,438\,400\,\gamma^{11}\,\hbar^{16}\, x_j^5\, y_i^5 + 22\,367\,689\,891\,268\,198\,400\,\gamma^{11}\,\hbar^{17}\, x_j^6\, y_i^6 +$$
$$3\,831\,183\,662\,792\,048\,640\,\gamma^{11}\,\hbar^{18}\, x_j^7\, y_i^7 - 45\,341\,461\,697\,495\,040\,000\,\gamma^{11}\,\hbar^{19}\, x_j^8\, y_i^8 -$$
$$14\,621\,400\,543\,783\,813\,120\,\gamma^{11}\,\hbar^{20}\, x_j^9\, y_i^9 + 24\,372\,990\,180\,596\,090\,880\,\gamma^{11}\,\hbar^{21}\, x_j^{10}\, y_i^{10} +$$
$$13\,362\,595\,688\,554\,168\,320\,\gamma^{11}\,\hbar^{22}\, x_j^{11}\, y_i^{11} - 1\,837\,060\,508\,102\,105\,088\,\gamma^{11}\,\hbar^{23}\, x_j^{12}\, y_i^{12} -$$
$$3\,227\,562\,629\,032\,550\,400\,\gamma^{11}\,\hbar^{24}\, x_j^{13}\, y_i^{13} - 1\,142\,741\,737\,520\,207\,616\,\gamma^{11}\,\hbar^{25}\, x_j^{14}\, y_i^{14} -$$

$$216\,060\,830\,477\,623\,296\,\gamma^{11}\hbar^{26}x_j^{17}y_i^{17} - 25\,369\,722\,554\,102\,784\,\gamma^{11}\hbar^{27}x_j^{18}y_i^{18} -$$
$$1\,948\,314\,874\,316\,800\,\gamma^{11}\hbar^{28}x_j^{17}y_i^{17} - 99\,246\,904\,596\,840\,\gamma^{11}\hbar^{29}x_j^{18}y_i^{18} -$$
$$3\,312\,572\,820\,480\,\gamma^{11}\hbar^{30}x_j^{19}y_i^{19} - 69\,361\,677\,000\,\gamma^{11}\hbar^{31}x_j^{20}y_i^{20} -$$
$$823\,284\,000\,\gamma^{11}\hbar^{32}x_j^{21}y_i^{21} - 4\,209\,975\,\gamma^{11}\hbar^{33}x_j^{22}y_i^{22}\Big)\epsilon^{11} + \frac{1}{63\,037\,891\,684\,424\,887\,566\,336\,000\,000}$$
$$\Big(-4\,878\,160\,205\,930\,708\,336\,640\,000\,\gamma^{12}\hbar^{15}x_j^3y_i^3 - 89\,835\,275\,729\,936\,056\,320\,000\,\gamma^{12}\hbar^{16}x_j^4y_i^4 +$$
$$580\,258\,512\,003\,005\,851\,631\,616\,000\,\gamma^{12}\hbar^{17}x_j^5y_i^5 + 50\,585\,017\,482\,494\,068\,654\,080\,000\,\gamma^{12}\hbar^{18}x_j^6y_i^6 -$$
$$3\,852\,988\,457\,644\,893\,150\,904\,320\,000\,\gamma^{12}\hbar^{19}x_j^7y_i^7 - 755\,690\,329\,825\,453\,114\,380\,288\,000\,\gamma^{12}\hbar^{20}x_j^8$$
$$y_i^8 + 5\,208\,456\,909\,869\,530\,277\,216\,256\,000\,\gamma^{12}\hbar^{21}x_j^9y_i^9 + 1\,793\,322\,455\,123\,168\,946\,398\,822\,400$$
$$\gamma^{12}\hbar^{22}x_j^{10}y_i^{10} - 2\,112\,772\,267\,107\,876\,114\,284\,544\,000\,\gamma^{12}\hbar^{23}x_j^{11}y_i^{11} -$$
$$1\,228\,988\,219\,451\,776\,082\,883\,584\,000\,\gamma^{12}\hbar^{24}x_j^{12}y_i^{12} + 77\,554\,570\,973\,037\,311\,243\,059\,200\,\gamma^{12}\hbar^{25}$$
$$x_j^{13}y_i^{13} + 237\,319\,388\,282\,914\,063\,170\,969\,600\,\gamma^{12}\hbar^{26}x_j^{14}y_i^{14} + 88\,742\,869\,127\,215\,150\,007\,107\,584$$
$$\gamma^{12}\hbar^{27}x_j^{15}y_i^{15} + 17\,637\,258\,527\,568\,950\,311\,641\,600\,\gamma^{12}\hbar^{28}x_j^{16}y_i^{16} +$$
$$2\,211\,493\,752\,192\,420\,657\,561\,600\,\gamma^{12}\hbar^{29}x_j^{17}y_i^{17} + 185\,731\,668\,470\,289\,496\,755\,200\,\gamma^{12}\hbar^{30}x_j^{18}y_i^{18} +$$
$$10\,683\,285\,838\,547\,370\,048\,000\,\gamma^{12}\hbar^{31}x_j^{19}y_i^{19} + 421\,017\,032\,163\,195\,468\,000\,\gamma^{12}\hbar^{32}x_j^{20}y_i^{20} +$$
$$11\,142\,491\,471\,983\,872\,000\,\gamma^{12}\hbar^{33}x_j^{21}y_i^{21} + 188\,677\,489\,700\,700\,000\,\gamma^{12}\hbar^{34}x_j^{22}y_i^{22} +$$
$$1\,840\,755\,997\,080\,000\,\gamma^{12}\hbar^{35}x_j^{23}y_i^{23} + 7\,844\,130\,669\,375\,\gamma^{12}\hbar^{36}x_j^{24}y_i^{24}\Big)\epsilon^{12} +$$
$$\frac{1}{252\,151\,566\,737\,699\,550\,265\,344\,000\,000}\Big(-55\,283\,246\,603\,037\,573\,120\,000\,\gamma^{13}\hbar^{15}x_j^2y_i^2 +$$
$$226\,384\,894\,839\,438\,861\,926\,400\,000\,\gamma^{13}\hbar^{17}x_j^4y_i^4 + 7\,996\,178\,507\,014\,707\,609\,600\,000\,\gamma^{13}\hbar^{18}x_j^5y_i^5 -$$
$$7\,332\,842\,155\,536\,216\,435\,916\,800\,000\,\gamma^{13}\hbar^{19}x_j^6y_i^6 - 809\,047\,077\,052\,438\,473\,080\,832\,000\,\gamma^{13}\hbar^{20}x_j^7$$
$$y_i^7 + 27\,046\,040\,227\,756\,594\,716\,672\,000\,000\,\gamma^{13}\hbar^{21}x_j^8y_i^8 + 5\,894\,431\,624\,265\,314\,629\,058\,560\,000$$
$$\gamma^{13}\hbar^{22}x_j^9y_i^9 - 25\,904\,936\,197\,833\,673\,204\,224\,000\,000\,\gamma^{13}\hbar^{23}x_j^{10}y_i^{10} -$$
$$9\,439\,286\,487\,091\,700\,371\,292\,160\,000\,\gamma^{13}\hbar^{24}x_j^{11}y_i^{11} + 8\,082\,271\,839\,080\,147\,921\,003\,151\,360$$
$$\gamma^{13}\hbar^{25}x_j^{12}y_i^{12} + 5\,010\,427\,946\,481\,982\,178\,918\,400\,000\,\gamma^{13}\hbar^{26}x_j^{13}y_i^{13} -$$
$$30\,402\,339\,168\,539\,635\,231\,334\,400\,\gamma^{13}\hbar^{27}x_j^{14}y_i^{14} - 781\,130\,374\,516\,801\,389\,949\,747\,200\,\gamma^{13}\hbar^{28}$$
$$x_j^{15}y_i^{15} - 308\,835\,608\,867\,983\,398\,868\,992\,000\,\gamma^{13}\hbar^{29}x_j^{16}y_i^{16} - 64\,091\,735\,584\,480\,044\,050\,448\,384$$
$$\gamma^{13}\hbar^{30}x_j^{17}y_i^{17} - 8\,483\,181\,333\,563\,727\,030\,240\,000\,\gamma^{13}\hbar^{31}x_j^{18}y_i^{18} -$$
$$765\,780\,486\,276\,234\,472\,243\,200\,\gamma^{13}\hbar^{32}x_j^{19}y_i^{19} - 48\,486\,948\,566\,880\,750\,967\,040\,\gamma^{13}\hbar^{33}x_j^{20}y_i^{20} -$$
$$2\,170\,745\,428\,545\,517\,824\,000\,\gamma^{13}\hbar^{34}x_j^{21}y_i^{21} - 68\,202\,874\,226\,300\,814\,000\,\gamma^{13}\hbar^{35}x_j^{22}y_i^{22} -$$
$$1\,466\,823\,460\,310\,208\,000\,\gamma^{13}\hbar^{36}x_j^{23}y_i^{23} - 20\,503\,976\,523\,030\,000\,\gamma^{13}\hbar^{37}x_j^{24}y_i^{24} -$$
$$167\,341\,454\,280\,000\,\gamma^{13}\hbar^{38}x_j^{25}y_i^{25} - 603\,394\,666\,875\,\gamma^{13}\hbar^{39}x_j^{26}y_i^{26}\Big)\epsilon^{13} +$$
$$\Big(\big(320\,310\,427\,972\,946\,488\,197\,120\,000\,\gamma^{14}\hbar^{17}x_j^3y_i^3 + 3\,024\,735\,987\,350\,899\,261\,440\,000\,\gamma^{14}\hbar^{18}x_j^4y_i^4 -$$
$$105\,933\,403\,182\,187\,067\,876\,573\,184\,000\,\gamma^{14}\hbar^{19}x_j^5y_i^5 -$$
$$5\,685\,687\,267\,705\,080\,591\,155\,200\,000\,\gamma^{14}\hbar^{20}x_j^6y_i^6 + 1\,385\,409\,604\,583\,021\,106\,010\,521\,600\,000$$
$$\gamma^{14}\hbar^{21}x_j^7y_i^7 + 182\,296\,096\,778\,919\,551\,600\,767\,795\,200\,\gamma^{14}\hbar^{22}x_j^8y_i^8 -$$
$$3\,184\,533\,248\,682\,622\,721\,612\,945\,817\,600\,\gamma^{14}\hbar^{23}x_j^9y_i^9 - 756\,134\,388\,877\,747\,472\,374\,195\,814\,400$$
$$\gamma^{14}\hbar^{24}x_j^{10}y_i^{10} + 2\,256\,967\,020\,564\,822\,891\,212\,439\,552\,000\,\gamma^{14}\hbar^{25}x_j^{11}y_i^{11} +$$
$$865\,836\,329\,294\,611\,876\,573\,532\,160\,000\,\gamma^{14}\hbar^{26}x_j^{12}y_i^{12} - 548\,159\,931\,166\,565\,974\,210\,447\,933\,440$$
$$\gamma^{14}\hbar^{27}x_j^{13}y_i^{13} - 364\,943\,468\,351\,345\,211\,869\,018\,849\,280\,\gamma^{14}\hbar^{28}x_j^{14}y_i^{14} -$$
$$14\,250\,492\,361\,299\,993\,473\,592\,852\,480\,\gamma^{14}\hbar^{29}x_j^{15}y_i^{15} + 46\,215\,565\,072\,447\,321\,048\,548\,556\,800$$
$$\gamma^{14}\hbar^{30}x_j^{16}y_i^{16} + 19\,384\,242\,697\,580\,447\,555\,400\,499\,200\,\gamma^{14}\hbar^{31}x_j^{17}y_i^{17} +$$
$$4\,181\,058\,781\,722\,821\,205\,993\,996\,288\,\gamma^{14}\hbar^{32}x_j^{18}y_i^{18} + 579\,221\,777\,563\,701\,209\,872\,736\,256$$
$$\gamma^{14}\hbar^{33}x_j^{19}y_i^{19} + 55\,493\,437\,978\,791\,114\,353\,251\,200\,\gamma^{14}\hbar^{34}x_j^{20}y_i^{20} +$$
$$3\,798\,514\,694\,414\,881\,887\,846\,400\,\gamma^{14}\hbar^{35}x_j^{21}y_i^{21} + 188\,224\,118\,238\,676\,236\,837\,120\,\gamma^{14}\hbar^{36}x_j^{22}y_i^{22} +$$
$$6\,751\,961\,581\,566\,801\,600\,000\,\gamma^{14}\hbar^{37}x_j^{23}y_i^{23} + 173\,171\,129\,142\,535\,524\,000\,\gamma^{14}\hbar^{38}x_j^{24}y_i^{24} +$$
$$3\,086\,972\,350\,516\,454\,400\,\gamma^{14}\hbar^{39}x_j^{25}y_i^{25} + 36\,229\,424\,851\,620\,000\,\gamma^{14}\hbar^{40}x_j^{26}y_i^{26} +$$
$$251\,012\,181\,420\,000\,\gamma^{14}\hbar^{41}x_j^{27}y_i^{27} + 775\,793\,143\,125\,\gamma^{14}\hbar^{42}x_j^{28}y_i^{28}\Big)\epsilon^{14}\Big)\Big/$$

Out[•]=

$$
\begin{aligned}
&18\,154\,912\,805\,114\,367\,619\,104\,768\,000\,000 + \\
&\Big(\big(1\,613\,192\,526\,587\,146\,272\,768\,000\,\gamma^{15}\,\hbar^{17}\,x_j^2\,y_i^2 - 26\,428\,933\,163\,077\,217\,386\,758\,144\,000\,\gamma^{15}\,\hbar^{19}\,x_j^4\,y_i^4 - \\
&\quad 527\,662\,512\,185\,420\,550\,242\,304\,000\,\gamma^{15}\,\hbar^{20}\,x_j^5\,y_i^5 + \\
&\quad 1\,928\,166\,926\,694\,793\,095\,336\,689\,664\,000\,\gamma^{15}\,\hbar^{21}\,x_j^6\,y_i^6 + \\
&\quad 139\,280\,159\,452\,298\,026\,717\,229\,875\,200\,\gamma^{15}\,\hbar^{22}\,x_j^7\,y_i^7 - 12\,717\,334\,159\,437\,877\,991\,807\,385\,600\,000 \\
&\quad \gamma^{15}\,\hbar^{23}\,x_j^8\,y_i^8 - 1\,920\,974\,226\,013\,178\,715\,757\,451\,673\,600\,\gamma^{15}\,\hbar^{24}\,x_j^9\,y_i^9 + \\
&\quad 19\,703\,893\,095\,090\,008\,555\,912\,095\,334\,400\,\gamma^{15}\,\hbar^{25}\,x_j^{10}\,y_i^{10} + \\
&\quad 5\,028\,565\,568\,677\,425\,972\,621\,449\,625\,600\,\gamma^{15}\,\hbar^{26}\,x_j^{11}\,y_i^{11} - \\
&\quad 10\,669\,848\,505\,823\,478\,926\,815\,384\,043\,520\,\gamma^{15}\,\hbar^{27}\,x_j^{12}\,y_i^{12} - \\
&\quad 4\,298\,266\,928\,910\,499\,603\,547\,553\,792\,000\,\gamma^{15}\,\hbar^{28}\,x_j^{13}\,y_i^{13} + \\
&\quad 2\,028\,871\,133\,823\,251\,433\,283\,634\,626\,560\,\gamma^{15}\,\hbar^{29}\,x_j^{14}\,y_i^{14} + \\
&\quad 1\,467\,116\,086\,425\,802\,816\,925\,529\,538\,560\,\gamma^{15}\,\hbar^{30}\,x_j^{15}\,y_i^{15} + \\
&\quad 111\,135\,847\,865\,804\,607\,904\,379\,043\,840\,\gamma^{15}\,\hbar^{31}\,x_j^{16}\,y_i^{16} - \\
&\quad 151\,317\,691\,303\,059\,142\,433\,535\,688\,704\,\gamma^{15}\,\hbar^{32}\,x_j^{17}\,y_i^{17} - 67\,711\,758\,796\,270\,086\,979\,695\,897\,600 \\
&\quad \gamma^{15}\,\hbar^{33}\,x_j^{18}\,y_i^{18} - 15\,131\,900\,528\,679\,813\,165\,093\,224\,448\,\gamma^{15}\,\hbar^{34}\,x_j^{19}\,y_i^{19} - \\
&\quad 2\,180\,065\,304\,270\,988\,742\,937\,791\,488\,\gamma^{15}\,\hbar^{35}\,x_j^{20}\,y_i^{20} - 219\,572\,925\,882\,587\,465\,855\,127\,552 \\
&\quad \gamma^{15}\,\hbar^{36}\,x_j^{21}\,y_i^{21} - 16\,032\,514\,537\,920\,692\,885\,673\,600\,\gamma^{15}\,\hbar^{37}\,x_j^{22}\,y_i^{22} - \\
&\quad 863\,097\,633\,723\,395\,119\,329\,280\,\gamma^{15}\,\hbar^{38}\,x_j^{23}\,y_i^{23} - 34\,425\,883\,461\,218\,109\,020\,160\,\gamma^{15}\,\hbar^{39}\,x_j^{24}\,y_i^{24} - \\
&\quad 1\,012\,302\,102\,604\,560\,768\,000\,\gamma^{15}\,\hbar^{40}\,x_j^{25}\,y_i^{25} - 21\,601\,587\,870\,093\,231\,000\,\gamma^{15}\,\hbar^{41}\,x_j^{26}\,y_i^{26} - \\
&\quad 324\,415\,332\,751\,910\,400\,\gamma^{15}\,\hbar^{42}\,x_j^{27}\,y_i^{27} - 3\,242\,240\,676\,675\,000\,\gamma^{15}\,\hbar^{43}\,x_j^{28}\,y_i^{28} - \\
&\quad 19\,308\,629\,340\,000\,\gamma^{15}\,\hbar^{44}\,x_j^{29}\,y_i^{29} - 51\,719\,542\,875\,\gamma^{15}\,\hbar^{45}\,x_j^{30}\,y_i^{30}\big)\,\epsilon^{15}\Big) \Big/ \\
&72\,619\,651\,220\,457\,470\,476\,419\,072\,000\,000 + O[\epsilon]^{16}\Big]
\end{aligned}
$$

$$
\begin{aligned}
P \to \mathbb{E}_{\{i,j\}\to\{\}}\Big[\tfrac{\alpha_j\,\beta_i}{\hbar},\ \tfrac{\eta_i\,\xi_j}{\hbar},\ 1 + \tfrac{\gamma\,\eta_i^2\,\xi_j^2\,\epsilon}{4\,\hbar} + \tfrac{\left(36\,\gamma^2\,\hbar^2\,\eta_i^2\,\xi_j^2 + 40\,\gamma^2\,\hbar\,\eta_i^3\,\xi_j^3 + 9\,\gamma^2\,\eta_i^4\,\xi_j^4\right)\epsilon^2}{288\,\hbar^2} + \tfrac{1}{1152\,\hbar^3} \\
\left(48\,\gamma^3\,\hbar^4\,\eta_i^2\,\xi_j^2 + 192\,\gamma^3\,\hbar^3\,\eta_i^3\,\xi_j^3 + 156\,\gamma^3\,\hbar^2\,\eta_i^4\,\xi_j^4 + 40\,\gamma^3\,\hbar\,\eta_i^5\,\xi_j^5 + 3\,\gamma^3\,\eta_i^6\,\xi_j^6\right)\epsilon^3 + \\
\tfrac{1}{4\,147\,200\,\hbar^4}\left(43\,200\,\gamma^4\,\hbar^6\,\eta_i^2\,\xi_j^2 + 508\,800\,\gamma^4\,\hbar^5\,\eta_i^3\,\xi_j^3 + 975\,600\,\gamma^4\,\hbar^4\,\eta_i^4\,\xi_j^4 + \right. \\
\left. 626\,112\,\gamma^4\,\hbar^3\,\eta_i^5\,\xi_j^5 + 164\,200\,\gamma^4\,\hbar^2\,\eta_i^6\,\xi_j^6 + 18\,000\,\gamma^4\,\hbar\,\eta_i^7\,\xi_j^7 + 675\,\gamma^4\,\eta_i^8\,\xi_j^8\right)\epsilon^4 + \\
\tfrac{1}{16\,588\,800\,\hbar^5}\left(34\,560\,\gamma^5\,\hbar^8\,\eta_i^2\,\xi_j^2 + 1\,152\,000\,\gamma^5\,\hbar^7\,\eta_i^3\,\xi_j^3 + 4\,564\,800\,\gamma^5\,\hbar^6\,\eta_i^4\,\xi_j^4 + 5\,719\,680\,\gamma^5\,\hbar^5\,\eta_i^5\,\xi_j^5 + \right. \\
\left. 3\,045\,840\,\gamma^5\,\hbar^4\,\eta_i^6\,\xi_j^6 + 779\,712\,\gamma^5\,\hbar^3\,\eta_i^7\,\xi_j^7 + 99\,400\,\gamma^5\,\hbar^2\,\eta_i^8\,\xi_j^8 + 6000\,\gamma^5\,\hbar\,\eta_i^9\,\xi_j^9 + 135\,\gamma^5\,\eta_i^{10}\,\xi_j^{10}\right) \\
\epsilon^5 + \tfrac{1}{175\,575\,859\,200\,\hbar^6}\left(60\,963\,840\,\gamma^6\,\hbar^{10}\,\eta_i^2\,\xi_j^2 + 5\,757\,696\,000\,\gamma^6\,\hbar^9\,\eta_i^3\,\xi_j^3 + \right. \\
44\,468\,040\,960\,\gamma^6\,\hbar^8\,\eta_i^4\,\xi_j^4 + 98\,619\,171\,840\,\gamma^6\,\hbar^7\,\eta_i^5\,\xi_j^5 + 91\,150\,536\,960\,\gamma^6\,\hbar^6\,\eta_i^6\,\xi_j^6 + \\
41\,585\,266\,944\,\gamma^6\,\hbar^5\,\eta_i^7\,\xi_j^7 + 10\,193\,979\,600\,\gamma^6\,\hbar^4\,\eta_i^8\,\xi_j^8 + 1\,389\,376\,576\,\gamma^6\,\hbar^3\,\eta_i^9\,\xi_j^9 + \\
\left. 104\,120\,100\,\gamma^6\,\hbar^2\,\eta_i^{10}\,\xi_j^{10} + 3\,969\,000\,\gamma^6\,\hbar\,\eta_i^{11}\,\xi_j^{11} + 59\,535\,\gamma^6\,\eta_i^{12}\,\xi_j^{12}\right)\epsilon^6 + \\
\tfrac{1}{702\,303\,436\,800\,\hbar^7}\left(34\,836\,480\,\gamma^7\,\hbar^{12}\,\eta_i^2\,\xi_j^2 + 9\,429\,073\,920\,\gamma^7\,\hbar^{11}\,\eta_i^3\,\xi_j^3 + 138\,123\,740\,160\,\gamma^7\,\hbar^{10}\,\eta_i^4\,\xi_j^4 + \right. \\
515\,550\,873\,600\,\gamma^7\,\hbar^9\,\eta_i^5\,\xi_j^5 + 767\,885\,287\,680\,\gamma^7\,\hbar^8\,\eta_i^6\,\xi_j^6 + 560\,338\,394\,112\,\gamma^7\,\hbar^7\,\eta_i^7\,\xi_j^7 + \\
223\,888\,549\,248\,\gamma^7\,\hbar^6\,\eta_i^8\,\xi_j^8 + 52\,139\,913\,984\,\gamma^7\,\hbar^5\,\eta_i^9\,\xi_j^9 + 7\,295\,410\,080\,\gamma^7\,\hbar^4\,\eta_i^{10}\,\xi_j^{10} + \\
\left. 614\,881\,792\,\gamma^7\,\hbar^3\,\eta_i^{11}\,\xi_j^{11} + 30\,261\,420\,\gamma^7\,\hbar^2\,\eta_i^{12}\,\xi_j^{12} + 793\,800\,\gamma^7\,\hbar\,\eta_i^{13}\,\xi_j^{13} + 8505\,\gamma^7\,\eta_i^{14}\,\xi_j^{14}\right)\epsilon^7 + \\
\tfrac{1}{5\,056\,584\,744\,960\,000\,\hbar^8}\left(31\,352\,832\,000\,\gamma^8\,\hbar^{14}\,\eta_i^2\,\xi_j^2 + 24\,615\,456\,768\,000\,\gamma^8\,\hbar^{13}\,\eta_i^3\,\xi_j^3 + \right. \\
676\,413\,835\,776\,000\,\gamma^8\,\hbar^{12}\,\eta_i^4\,\xi_j^4 + 4\,129\,605\,659\,934\,720\,\gamma^8\,\hbar^{11}\,\eta_i^5\,\xi_j^5 + \\
9\,503\,408\,552\,601\,600\,\gamma^8\,\hbar^{10}\,\eta_i^6\,\xi_j^6 + 10\,470\,083\,684\,659\,200\,\gamma^8\,\hbar^9\,\eta_i^7\,\xi_j^7 + 6\,299\,686\,311\,609\,600 \\
\gamma^8\,\hbar^8\,\eta_i^8\,\xi_j^8 + 2\,240\,581\,404\,211\,200\,\gamma^8\,\hbar^7\,\eta_i^9\,\xi_j^9 + 494\,282\,140\,195\,968\,\gamma^8\,\hbar^6\,\eta_i^{10}\,\xi_j^{10} + \\
69\,441\,124\,665\,600\,\gamma^8\,\hbar^5\,\eta_i^{11}\,\xi_j^{11} + 6\,261\,451\,084\,000\,\gamma^8\,\hbar^4\,\eta_i^{12}\,\xi_j^{12} + 357\,890\,198\,400\,\gamma^8\,\hbar^3\,\eta_i^{13}\,\xi_j^{13} + \\
\left. 12\,438\,846\,000\,\gamma^8\,\hbar^2\,\eta_i^{14}\,\xi_j^{14} + 238\,140\,000\,\gamma^8\,\hbar\,\eta_i^{15}\,\xi_j^{15} + 1\,913\,625\,\gamma^8\,\eta_i^{16}\,\xi_j^{16}\right)\epsilon^8 - \\
\tfrac{1}{20\,226\,338\,979\,840\,000\,\hbar^9}\left(-13\,934\,592\,000\,\gamma^9\,\hbar^{16}\,\eta_i^2\,\xi_j^2 - 32\,049\,561\,600\,000\,\gamma^9\,\hbar^{15}\,\eta_i^3\,\xi_j^3 - \right. \\
1\,648\,653\,834\,240\,000\,\gamma^9\,\hbar^{14}\,\eta_i^4\,\xi_j^4 - 16\,190\,993\,077\,862\,400\,\gamma^9\,\hbar^{13}\,\eta_i^5\,\xi_j^5 - \\
56\,086\,840\,154\,419\,200\,\gamma^9\,\hbar^{12}\,\eta_i^6\,\xi_j^6 - 90\,068\,037\,366\,988\,800\,\gamma^9\,\hbar^{11}\,\eta_i^7\,\xi_j^7
\end{aligned}
$$

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\begin{aligned}
&90\,080\,840\,194\,419\,200\,\gamma^{9}\,\hbar^{11}\,\eta_i^{9}\,\xi_j^{9} - 90\,008\,057\,566\,988\,800\,\gamma^{9}\,\hbar^{11}\,\eta_i^{9}\,\xi_j^{9} - \\
&77\,936\,389\,613\,107\,200\,\gamma^{9}\,\hbar^{10}\,\eta_i^{8}\,\xi_j^{8} - 39\,848\,018\,452\,992\,000\,\gamma^{9}\,\hbar^{9}\,\eta_i^{9}\,\xi_j^{9} - 12\,775\,154\,619\,651\,840\,\gamma^{9}\,\hbar^{8}\,\eta_i^{10}\,\xi_j^{10} - \\
&2\,668\,417\,269\,841\,920\,\gamma^{9}\,\hbar^{7}\,\eta_i^{11}\,\xi_j^{11} - 371\,528\,530\,128\,768\,\gamma^{9}\,\hbar^{6}\,\eta_i^{12}\,\xi_j^{12} - \\
&34\,816\,705\,939\,200\,\gamma^{9}\,\hbar^{5}\,\eta_i^{13}\,\xi_j^{13} - 2\,187\,764\,740\,000\,\gamma^{9}\,\hbar^{4}\,\eta_i^{14}\,\xi_j^{14} - 90\,283\,025\,280\,\gamma^{9}\,\hbar^{3}\,\eta_i^{15}\,\xi_j^{15} - \\
&2\,332\,638\,000\,\gamma^{9}\,\hbar^{2}\,\eta_i^{16}\,\xi_j^{16} - 34\,020\,000\,\gamma^{9}\,\hbar\,\eta_i^{17}\,\xi_j^{17} - 212\,625\,\gamma^{9}\,\eta_i^{18}\,\xi_j^{18}\Big)\,\epsilon^{9} - \\
&\frac{1}{176\,211\,865\,192\,366\,080\,000\,\hbar^{10}}\Big(-12\,139\,816\,550\,400\,\gamma^{10}\,\hbar^{18}\,\eta_i^{2}\,\xi_j^{2} - 82\,402\,377\,007\,104\,000\,\gamma^{10}\,\hbar^{17}\,\eta_i^{3}\,\xi_j^{3} - \\
&7\,957\,298\,705\,758\,617\,600\,\gamma^{10}\,\hbar^{16}\,\eta_i^{4}\,\xi_j^{4} - 124\,507\,516\,484\,026\,368\,000\,\gamma^{10}\,\hbar^{15}\,\eta_i^{5}\,\xi_j^{5} - \\
&638\,337\,171\,705\,878\,937\,600\,\gamma^{10}\,\hbar^{14}\,\eta_i^{6}\,\xi_j^{6} - 1\,460\,032\,285\,830\,647\,316\,480\,\gamma^{10}\,\hbar^{13}\,\eta_i^{7}\,\xi_j^{7} - \\
&1\,763\,823\,205\,904\,946\,278\,400\,\gamma^{10}\,\hbar^{12}\,\eta_i^{8}\,\xi_j^{8} - 1\,248\,681\,937\,910\,028\,779\,520\,\gamma^{10}\,\hbar^{11}\,\eta_i^{9}\,\xi_j^{9} - \\
&554\,643\,998\,163\,472\,757\,760\,\gamma^{10}\,\hbar^{10}\,\eta_i^{10}\,\xi_j^{10} - 161\,901\,687\,275\,258\,480\,640\,\gamma^{10}\,\hbar^{9}\,\eta_i^{11}\,\xi_j^{11} - \\
&32\,043\,418\,281\,017\,011\,968\,\gamma^{10}\,\hbar^{8}\,\eta_i^{12}\,\xi_j^{12} - 4\,386\,327\,199\,715\,450\,880\,\gamma^{10}\,\hbar^{7}\,\eta_i^{13}\,\xi_j^{13} - \\
&419\,506\,054\,238\,506\,752\,\gamma^{10}\,\hbar^{6}\,\eta_i^{14}\,\xi_j^{14} - 28\,047\,664\,603\,904\,000\,\gamma^{10}\,\hbar^{5}\,\eta_i^{15}\,\xi_j^{15} - \\
&1\,297\,195\,829\,344\,800\,\gamma^{10}\,\hbar^{4}\,\eta_i^{16}\,\xi_j^{16} - 40\,440\,134\,528\,640\,\gamma^{10}\,\hbar^{3}\,\eta_i^{17}\,\xi_j^{17} - \\
&806\,921\,230\,500\,\gamma^{10}\,\hbar^{2}\,\eta_i^{18}\,\xi_j^{18} - 9\,261\,945\,000\,\gamma^{10}\,\hbar\,\eta_i^{19}\,\xi_j^{19} - 46\,309\,725\,\gamma^{10}\,\eta_i^{20}\,\xi_j^{20}\Big)\,\epsilon^{10} - \\
&\frac{1}{704\,847\,460\,769\,464\,320\,000\,\hbar^{11}}\Big(-4\,414\,478\,745\,600\,\gamma^{11}\,\hbar^{20}\,\eta_i^{2}\,\xi_j^{2} - 88\,895\,829\,993\,062\,400\,\gamma^{11}\,\hbar^{19}\,\eta_i^{3}\,\xi_j^{3} - \\
&16\,199\,488\,556\,413\,747\,200\,\gamma^{11}\,\hbar^{18}\,\eta_i^{4}\,\xi_j^{4} - 401\,795\,271\,711\,719\,424\,000\,\gamma^{11}\,\hbar^{17}\,\eta_i^{5}\,\xi_j^{5} - \\
&3\,014\,828\,466\,123\,143\,577\,600\,\gamma^{11}\,\hbar^{16}\,\eta_i^{6}\,\xi_j^{6} - 9\,666\,850\,775\,535\,935\,815\,680\,\gamma^{11}\,\hbar^{15}\,\eta_i^{7}\,\xi_j^{7} - \\
&15\,975\,988\,381\,070\,765\,752\,320\,\gamma^{11}\,\hbar^{14}\,\eta_i^{8}\,\xi_j^{8} - 15\,269\,573\,261\,343\,325\,224\,960\,\gamma^{11}\,\hbar^{13}\,\eta_i^{9}\,\xi_j^{9} - \\
&9\,108\,822\,110\,478\,114\,816\,000\,\gamma^{11}\,\hbar^{12}\,\eta_i^{10}\,\xi_j^{10} - 3\,574\,835\,624\,252\,190\,228\,480\,\gamma^{11}\,\hbar^{11}\,\eta_i^{11}\,\xi_j^{11} - \\
&957\,948\,024\,826\,717\,461\,504\,\gamma^{11}\,\hbar^{10}\,\eta_i^{12}\,\xi_j^{12} - 179\,895\,549\,936\,712\,329\,216\,\gamma^{11}\,\hbar^{9}\,\eta_i^{13}\,\xi_j^{13} - \\
&24\,089\,621\,425\,488\,039\,168\,\gamma^{11}\,\hbar^{8}\,\eta_i^{14}\,\xi_j^{14} - 2\,323\,202\,320\,821\,043\,200\,\gamma^{11}\,\hbar^{7}\,\eta_i^{15}\,\xi_j^{15} - \\
&161\,814\,285\,037\,853\,184\,\gamma^{11}\,\hbar^{6}\,\eta_i^{16}\,\xi_j^{16} - 8\,099\,576\,910\,740\,480\,\gamma^{11}\,\hbar^{5}\,\eta_i^{17}\,\xi_j^{17} - \\
&287\,072\,874\,858\,000\,\gamma^{11}\,\hbar^{4}\,\eta_i^{18}\,\xi_j^{18} - 6\,996\,589\,427\,520\,\gamma^{11}\,\hbar^{3}\,\eta_i^{19}\,\xi_j^{19} - \\
&111\,040\,429\,500\,\gamma^{11}\,\hbar^{2}\,\eta_i^{20}\,\xi_j^{20} - 1\,029\,105\,000\,\gamma^{11}\,\hbar\,\eta_i^{21}\,\xi_j^{21} - 4\,209\,975\,\gamma^{11}\,\eta_i^{22}\,\xi_j^{22}\Big)\,\epsilon^{11} - \\
&\Big(\Big(-32\,900\,668\,643\,082\,240\,000\,\gamma^{12}\,\hbar^{22}\,\eta_i^{2}\,\xi_j^{2} - 1\,972\,672\,913\,021\,321\,871\,360\,000\,\gamma^{12}\,\hbar^{21}\,\eta_i^{3}\,\xi_j^{3} - \\
&682\,612\,410\,448\,307\,569\,950\,720\,000\,\gamma^{12}\,\hbar^{20}\,\eta_i^{4}\,\xi_j^{4} - \\
&26\,779\,896\,597\,449\,610\,373\,260\,902\,400\,\gamma^{12}\,\hbar^{19}\,\eta_i^{5}\,\xi_j^{5} - 291\,910\,964\,870\,193\,631\,467\,208\,704\,000\,\gamma^{12}\,\hbar^{18}\,\eta_i^{6}\,\xi_j^{6} - \\
&1\,297\,548\,568\,268\,772\,141\,415\,661\,568\,000\,\gamma^{12}\,\hbar^{17}\,\eta_i^{7}\,\xi_j^{7} - \\
&2\,891\,273\,928\,631\,953\,764\,684\,488\,704\,000\,\gamma^{12}\,\hbar^{16}\,\eta_i^{8}\,\xi_j^{8} - 3\,664\,606\,662\,481\,683\,205\,721\,161\,728\,000\,\gamma^{12}\,\hbar^{15}\,\eta_i^{9}\,\xi_j^{9} - \\
&2\,872\,753\,178\,128\,289\,580\,854\,155\,345\,920\,\gamma^{12}\,\hbar^{14}\,\eta_i^{10}\,\xi_j^{10} - \\
&1\,476\,517\,660\,093\,901\,836\,797\,139\,353\,600\,\gamma^{12}\,\hbar^{13}\,\eta_i^{11}\,\xi_j^{11} - 518\,856\,782\,186\,135\,339\,845\,432\,934\,400\,\gamma^{12}\,\hbar^{12}\,\eta_i^{12}\,\xi_j^{12} - \\
&128\,518\,373\,360\,432\,616\,536\,405\,606\,400\,\gamma^{12}\,\hbar^{11}\,\eta_i^{13}\,\xi_j^{13} - \\
&22\,937\,778\,487\,295\,052\,834\,298\,060\,800\,\gamma^{12}\,\hbar^{10}\,\eta_i^{14}\,\xi_j^{14} - 2\,995\,278\,658\,885\,072\,948\,299\,964\,416\,\gamma^{12}\,\hbar^{9}\,\eta_i^{15}\,\xi_j^{15} - \\
&288\,890\,856\,113\,516\,719\,186\,924\,800\,\gamma^{12}\,\hbar^{8}\,\eta_i^{16}\,\xi_j^{16} - \\
&20\,661\,993\,523\,813\,315\,145\,472\,000\,\gamma^{12}\,\hbar^{7}\,\eta_i^{17}\,\xi_j^{17} - 1\,093\,913\,403\,375\,799\,273\,467\,200\,\gamma^{12}\,\hbar^{6}\,\eta_i^{18}\,\xi_j^{18} - \\
&42\,504\,948\,794\,806\,754\,256\,000\,\gamma^{12}\,\hbar^{5}\,\eta_i^{19}\,\xi_j^{19} - 1\,190\,844\,884\,762\,302\,770\,000\,\gamma^{12}\,\hbar^{4}\,\eta_i^{20}\,\xi_j^{20} - \\
&23\,307\,257\,013\,368\,328\,000\,\gamma^{12}\,\hbar^{3}\,\eta_i^{21}\,\xi_j^{21} - 301\,193\,700\,022\,215\,000\,\gamma^{12}\,\hbar^{2}\,\eta_i^{22}\,\xi_j^{22} - \\
&2\,300\,944\,996\,350\,000\,\gamma^{12}\,\hbar\,\eta_i^{23}\,\xi_j^{23} - 7\,844\,130\,669\,375\,\gamma^{12}\,\eta_i^{24}\,\xi_j^{24}\Big)\,\epsilon^{12}\Big)\Big/ \\
&\Big(63\,037\,891\,684\,424\,887\,566\,336\,000\,000\,\hbar^{12}\Big) - \\
&\Big(\Big(-10\,123\,282\,659\,409\,920\,000\,\gamma^{13}\,\hbar^{24}\,\eta_i^{2}\,\xi_j^{2} - 1\,811\,730\,153\,279\,062\,016\,000\,000\,\gamma^{13}\,\hbar^{23}\,\eta_i^{3}\,\xi_j^{3} - \\
&1\,198\,075\,271\,418\,796\,061\,491\,200\,000\,\gamma^{13}\,\hbar^{22}\,\eta_i^{4}\,\xi_j^{4} - \\
&74\,326\,433\,649\,635\,025\,069\,539\,328\,000\,\gamma^{13}\,\hbar^{21}\,\eta_i^{5}\,\xi_j^{5} - \\
&1\,171\,330\,058\,358\,908\,596\,439\,875\,584\,000\,\gamma^{13}\,\hbar^{20}\,\eta_i^{6}\,\xi_j^{6} - 7\,160\,285\,455\,091\,262\,495\,653\,363\,712\,000\,\gamma^{13}\,\hbar^{19}\,\eta_i^{7}\,\xi_j^{7} - \\
&21\,284\,063\,509\,627\,442\,988\,075\,515\,904\,000\,\gamma^{13}\,\hbar^{18}\,\eta_i^{8}\,\xi_j^{8} - \\
&35\,305\,840\,171\,054\,174\,298\,577\,960\,960\,000\,\gamma^{13}\,\hbar^{17}\,\eta_i^{9}\,\xi_j^{9} - \\
&35\,798\,655\,607\,466\,508\,639\,069\,246\,259\,200\,\gamma^{13}\,\hbar^{16}\,\eta_i^{10}\,\xi_j^{10} -
\end{aligned}
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\begin{aligned}
&23\,645\,912\,997\,011\,751\,863\,528\,561\,049\,600\,\gamma^{13}\,\hbar^{15}\,\eta_i^{11}\,\xi_j^{11} -\\
&10\,654\,612\,077\,989\,989\,540\,548\,367\,810\,560\,\gamma^{13}\,\hbar^{14}\,\eta_i^{12}\,\xi_j^{12} -\\
&3\,388\,719\,964\,626\,294\,849\,836\,561\,203\,200\,\gamma^{13}\,\hbar^{13}\,\eta_i^{13}\,\xi_j^{13} - 780\,399\,399\,285\,244\,112\,510\,055\,628\,800\\
&\quad\gamma^{13}\,\hbar^{12}\,\eta_i^{14}\,\xi_j^{14} - 132\,610\,324\,084\,493\,047\,742\,880\,645\,120\,\gamma^{13}\,\hbar^{11}\,\eta_i^{15}\,\xi_j^{15} -\\
&16\,853\,397\,130\,090\,483\,979\,294\,453\,760\,\gamma^{13}\,\hbar^{10}\,\eta_i^{16}\,\xi_j^{16} - 1\,616\,238\,526\,916\,931\,931\,791\,138\,816\\
&\quad\gamma^{13}\,\hbar^{9}\,\eta_i^{17}\,\xi_j^{17} - 117\,492\,155\,670\,712\,047\,594\,969\,600\,\gamma^{13}\,\hbar^{8}\,\eta_i^{18}\,\xi_j^{18} -\\
&6\,475\,227\,824\,915\,377\,976\,448\,000\,\gamma^{13}\,\hbar^{7}\,\eta_i^{19}\,\xi_j^{19} - 269\,239\,487\,922\,000\,643\,087\,040\,\gamma^{13}\,\hbar^{6}\,\eta_i^{20}\,\xi_j^{20} -\\
&8\,353\,180\,043\,497\,297\,008\,000\,\gamma^{13}\,\hbar^{5}\,\eta_i^{21}\,\xi_j^{21} - 189\,592\,101\,133\,384\,950\,000\,\gamma^{13}\,\hbar^{4}\,\eta_i^{22}\,\xi_j^{22} -\\
&3\,044\,869\,488\,532\,872\,000\,\gamma^{13}\,\hbar^{3}\,\eta_i^{23}\,\xi_j^{23} - 32\,657\,149\,640\,115\,000\,\gamma^{13}\,\hbar^{2}\,\eta_i^{24}\,\xi_j^{24} -\\
&209\,176\,817\,850\,000\,\gamma^{13}\,\hbar\,\eta_i^{25}\,\xi_j^{25} - 603\,394\,666\,875\,\gamma^{13}\,\eta_i^{26}\,\xi_j^{26}\big)\,\epsilon^{13}\big)\,/\\
&\big(252\,151\,566\,737\,699\,550\,265\,344\,000\,000\,\hbar^{13}\big) -\\
&\Big(\big(-52\,062\,596\,534\,108\,160\,000\,\gamma^{14}\,\hbar^{26}\,\eta_i^{2}\,\xi_j^{2} - 27\,857\,712\,000\,800\,076\,595\,200\,000\,\gamma^{14}\,\hbar^{25}\,\eta_i^{3}\,\xi_j^{3} -\\
&\quad35\,420\,142\,639\,581\,569\,524\,695\,040\,000\,\gamma^{14}\,\hbar^{24}\,\eta_i^{4}\,\xi_j^{4} - 3\,478\,356\,410\,249\,452\,746\,524\,590\,080\,000\\
&\quad\gamma^{14}\,\hbar^{23}\,\eta_i^{5}\,\xi_j^{5} - 79\,015\,399\,603\,221\,679\,621\,621\,678\,080\,000\,\gamma^{14}\,\hbar^{22}\,\eta_i^{6}\,\xi_j^{6} -\\
&\quad660\,464\,375\,963\,016\,209\,754\,507\,706\,368\,000\,\gamma^{14}\,\hbar^{21}\,\eta_i^{7}\,\xi_j^{7} -\\
&\quad2\,598\,266\,982\,096\,276\,280\,512\,080\,117\,760\,000\,\gamma^{14}\,\hbar^{20}\,\eta_i^{8}\,\xi_j^{8} -\\
&\quad5\,584\,859\,664\,562\,825\,891\,758\,252\,490\,752\,000\,\gamma^{14}\,\hbar^{19}\,\eta_i^{9}\,\xi_j^{9} -\\
&\quad7\,237\,591\,425\,341\,685\,639\,098\,381\,677\,363\,200\,\gamma^{14}\,\hbar^{18}\,\eta_i^{10}\,\xi_j^{10} -\\
&\quad6\,057\,719\,950\,690\,533\,435\,265\,914\,332\,774\,400\,\gamma^{14}\,\hbar^{17}\,\eta_i^{11}\,\xi_j^{11} -\\
&\quad3\,442\,558\,512\,485\,834\,454\,149\,988\,655\,104\,000\,\gamma^{14}\,\hbar^{16}\,\eta_i^{12}\,\xi_j^{12} -\\
&\quad1\,378\,900\,555\,462\,664\,380\,092\,746\,406\,297\,600\,\gamma^{14}\,\hbar^{15}\,\eta_i^{13}\,\xi_j^{13} -\\
&\quad400\,473\,911\,036\,821\,416\,416\,258\,840\,985\,600\,\gamma^{14}\,\hbar^{14}\,\eta_i^{14}\,\xi_j^{14} -\\
&\quad86\,177\,934\,700\,410\,704\,312\,919\,030\,497\,280\,\gamma^{14}\,\hbar^{13}\,\eta_i^{15}\,\xi_j^{15} -\\
&\quad13\,967\,081\,087\,210\,966\,692\,549\,478\,891\,520\,\gamma^{14}\,\hbar^{12}\,\eta_i^{16}\,\xi_j^{16} -\\
&\quad1\,725\,566\,419\,044\,859\,279\,918\,661\,369\,856\,\gamma^{14}\,\hbar^{11}\,\eta_i^{17}\,\xi_j^{17} -\\
&\quad163\,858\,299\,649\,804\,813\,572\,702\,443\,520\,\gamma^{14}\,\hbar^{10}\,\eta_i^{18}\,\xi_j^{18} - 12\,016\,909\,295\,598\,919\,939\,361\,132\,544\\
&\quad\gamma^{14}\,\hbar^{9}\,\eta_i^{19}\,\xi_j^{19} - 681\,497\,199\,887\,363\,675\,828\,812\,800\,\gamma^{14}\,\hbar^{8}\,\eta_i^{20}\,\xi_j^{20} -\\
&\quad29\,812\,174\,305\,986\,514\,887\,244\,800\,\gamma^{14}\,\hbar^{7}\,\eta_i^{21}\,\xi_j^{21} - 998\,936\,616\,127\,537\,580\,613\,120\,\gamma^{14}\,\hbar^{6}\,\eta_i^{22}\,\xi_j^{22} -\\
&\quad25\,311\,128\,617\,941\,854\,688\,000\,\gamma^{14}\,\hbar^{5}\,\eta_i^{23}\,\xi_j^{23} - 474\,777\,094\,360\,538\,970\,000\,\gamma^{14}\,\hbar^{4}\,\eta_i^{24}\,\xi_j^{24} -\\
&\quad6\,368\,656\,523\,574\,945\,600\,\gamma^{14}\,\hbar^{3}\,\eta_i^{25}\,\xi_j^{25} - 57\,596\,836\,794\,997\,500\,\gamma^{14}\,\hbar^{2}\,\eta_i^{26}\,\xi_j^{26} -\\
&\quad313\,765\,226\,775\,000\,\gamma^{14}\,\hbar\,\eta_i^{27}\,\xi_j^{27} - 775\,793\,143\,125\,\gamma^{14}\,\eta_i^{28}\,\xi_j^{28}\big)\,\epsilon^{14}\big)\,/\\
&\quad\big(18\,154\,912\,805\,114\,367\,619\,104\,768\,000\,000\,\hbar^{14}\big) -\\
&\quad\Big(\big(-13\,883\,359\,075\,762\,176\,000\,\gamma^{15}\,\hbar^{28}\,\eta_i^{2}\,\xi_j^{2} - 22\,235\,643\,429\,177\,004\,130\,304\,000\,\gamma^{15}\,\hbar^{27}\,\eta_i^{3}\,\xi_j^{3} -\\
&\qquad54\,662\,067\,932\,567\,635\,526\,418\,432\,000\,\gamma^{15}\,\hbar^{26}\,\eta_i^{4}\,\xi_j^{4} - 8\,512\,647\,726\,608\,477\,076\,974\,469\,120\,000\\
&\qquad\gamma^{15}\,\hbar^{25}\,\eta_i^{5}\,\xi_j^{5} - 278\,279\,237\,894\,678\,891\,607\,575\,494\,656\,000\,\gamma^{15}\,\hbar^{24}\,\eta_i^{6}\,\xi_j^{6} -\\
&\qquad3\,167\,585\,813\,396\,438\,549\,853\,629\,526\,835\,200\,\gamma^{15}\,\hbar^{23}\,\eta_i^{7}\,\xi_j^{7} -\\
&\qquad16\,393\,654\,995\,379\,346\,879\,864\,146\,545\,868\,800\,\gamma^{15}\,\hbar^{22}\,\eta_i^{8}\,\xi_j^{8} -\\
&\qquad45\,313\,520\,145\,168\,948\,847\,357\,850\,969\,702\,400\,\gamma^{15}\,\hbar^{21}\,\eta_i^{9}\,\xi_j^{9} -\\
&\qquad74\,365\,645\,799\,191\,823\,412\,934\,458\,212\,352\,000\,\gamma^{15}\,\hbar^{20}\,\eta_i^{10}\,\xi_j^{10} -\\
&\qquad78\,020\,350\,556\,645\,740\,650\,650\,471\,183\,155\,200\,\gamma^{15}\,\hbar^{19}\,\eta_i^{11}\,\xi_j^{11} -\\
&\qquad55\,220\,138\,242\,484\,816\,028\,188\,902\,163\,742\,720\,\gamma^{15}\,\hbar^{18}\,\eta_i^{12}\,\xi_j^{12} -\\
&\qquad27\,451\,183\,573\,299\,153\,958\,085\,058\,539\,028\,480\,\gamma^{15}\,\hbar^{17}\,\eta_i^{13}\,\xi_j^{13} -\\
&\qquad9\,885\,702\,287\,890\,879\,426\,466\,239\,100\,682\,240\,\gamma^{15}\,\hbar^{16}\,\eta_i^{14}\,\xi_j^{14} -\\
&\qquad2\,641\,332\,546\,159\,897\,407\,998\,646\,314\,598\,400\,\gamma^{15}\,\hbar^{15}\,\eta_i^{15}\,\xi_j^{15} -\\
&\qquad533\,431\,473\,209\,807\,323\,607\,009\,474\,641\,920\,\gamma^{15}\,\hbar^{14}\,\eta_i^{16}\,\xi_j^{16} -\\
&\qquad82\,603\,332\,880\,819\,765\,509\,698\,785\,640\,448\,\gamma^{15}\,\hbar^{13}\,\eta_i^{17}\,\xi_j^{17} -\\
&\qquad\cdots\,\gamma^{15}\,\hbar^{12}\,\eta_i^{18}\,\epsilon^{18}
\end{aligned}
$$

$$9\,914\,334\,869\,880\,994\,246\,788\,850\,900\,992\,\gamma^{15}\,\hbar^{12}\,\eta_i^{18}\,\xi_j^{18} -$$
$$929\,423\,116\,271\,739\,795\,912\,808\,759\,296\,\gamma^{15}\,\hbar^{11}\,\eta_i^{19}\,\xi_j^{19} -$$
$$68\,381\,501\,443\,283\,548\,320\,122\,849\,280\,\gamma^{15}\,\hbar^{10}\,\eta_i^{20}\,\xi_j^{20} - 3\,956\,433\,650\,033\,951\,188\,264\,501\,248$$
$$\gamma^{15}\,\hbar^{9}\,\eta_i^{21}\,\xi_j^{21} - 179\,836\,600\,480\,625\,011\,069\,386\,240\,\gamma^{15}\,\hbar^{8}\,\eta_i^{22}\,\xi_j^{22} -$$
$$6\,393\,717\,840\,171\,589\,582\,054\,400\,\gamma^{15}\,\hbar^{7}\,\eta_i^{23}\,\xi_j^{23} - 176\,279\,574\,719\,955\,374\,828\,160\,\gamma^{15}\,\hbar^{6}\,\eta_i^{24}\,\xi_j^{24} -$$
$$3\,715\,873\,256\,489\,730\,336\,000\,\gamma^{15}\,\hbar^{5}\,\eta_i^{25}\,\xi_j^{25} - 58\,561\,791\,458\,041\,872\,000\,\gamma^{15}\,\hbar^{4}\,\eta_i^{26}\,\xi_j^{26} -$$
$$665\,911\,393\,677\,129\,600\,\gamma^{15}\,\hbar^{3}\,\eta_i^{27}\,\xi_j^{27} - 5\,146\,554\,245\,332\,500\,\gamma^{15}\,\hbar^{2}\,\eta_i^{28}\,\xi_j^{28} -$$
$$24\,135\,786\,675\,000\,\gamma^{15}\,\hbar\,\eta_i^{29}\,\xi_j^{29} - 51\,719\,542\,875\,\gamma^{15}\,\eta_i^{30}\,\xi_j^{30}\Big)\,\epsilon^{15}\Big) \Big/$$
$$\left(72\,619\,651\,220\,457\,470\,476\,419\,072\,000\,000\,\hbar^{15}\right) + O[\epsilon]^{16}\Big]$$

In[•]:= $\hbar = \gamma = 1$

Out[•]= 1

In[•]:= `RR = Simplify[Log[Block[{$k = 15}, R_{i,j}[[3]]] /. {x_j → x, y_i → 1}]]`

Out[•]=
$$-\frac{x^2\,\epsilon}{4} + \frac{x^3\,\epsilon^2}{9} + \frac{1}{48}\left(x^2 - 3\,x^4\right)\epsilon^3 + \left(-\frac{x^3}{36} + \frac{x^5}{25}\right)\epsilon^4 + \frac{\left(-3\,x^2 + 45\,x^4 - 40\,x^6\right)\epsilon^5}{1440} +$$
$$\left(\frac{7\,x^3}{1080} - \frac{x^5}{30} + \frac{x^7}{49}\right)\epsilon^6 + \frac{\left(17\,x^2 - 1071\,x^4 + 2800\,x^6 - 1260\,x^8\right)\epsilon^7}{80\,640} + \left(-\frac{809\,x^3}{544\,320} + \frac{9\,x^5}{400} - \frac{x^7}{28} + \frac{x^9}{81}\right)\epsilon^8 -$$
$$\frac{1}{7\,257\,600}\left(x^2\left(155 - 39\,525\,x^2 + 247\,800\,x^4 - 264\,600\,x^6 + 72\,576\,x^8\right)\right)\epsilon^9 +$$
$$\left(\frac{1847\,x^3}{5\,443\,200} - \frac{2189\,x^5}{151\,200} + \frac{27\,x^7}{560} - \frac{x^9}{27} + \frac{x^{11}}{121}\right)\epsilon^{10} +$$
$$\left(x^2\left(2073 - 2\,120\,679\,x^2 + 30\,404\,000\,x^4 - 61\,995\,780\,x^6 + 35\,925\,120\,x^8 - 6\,652\,800\,x^{10}\right)\epsilon^{11}\right) \Big/ 958\,003\,200 +$$
$$\left(-\frac{7943\,x^3}{102\,643\,200} + \frac{83\,507\,x^5}{9\,072\,000} - \frac{809\,x^7}{13\,230} + \frac{271\,x^9}{3240} - \frac{5\,x^{11}}{132} + \frac{x^{13}}{169}\right)\epsilon^{12} +$$
$$\left(-\frac{5461\,x^2}{24\,908\,083\,200} + \frac{5461\,x^4}{6\,082\,560} - \frac{18\,091\,x^6}{622\,080} + \frac{29\,x^8}{270} - \frac{21\,x^{10}}{200} + \frac{11\,x^{12}}{288} - \frac{x^{14}}{196}\right)\epsilon^{13} +$$
$$\left(\frac{6\,921\,461\,x^3}{392\,302\,310\,400} - \frac{388\,189\,x^5}{66\,528\,000} + \frac{64\,619\,x^7}{846\,720} - \frac{898\,x^9}{5103} + \frac{17\,x^{11}}{132} - \frac{x^{13}}{26} + \frac{x^{15}}{225}\right)\epsilon^{14} + \frac{1}{41\,845\,579\,776\,000}$$
$$x^2\left(929\,569 - 15\,229\,128\,927\,x^2 + 1\,111\,068\,613\,200\,x^4 - 7\,330\,419\,156\,060\,x^6 + 11\,427\,309\,653\,760\,x^8 -\right.$$
$$\left.6\,486\,307\,027\,200\,x^{10} + 1\,619\,025\,408\,000\,x^{12} - 163\,459\,296\,000\,x^{14}\right)\epsilon^{15} + O[\epsilon]^{16}$$

In[•]:=
```
PP = Simplify[Log[Block[{$k = 15}, P_{i,j}; P_{i,j}[[3]]] /. {ξ_j → ξ, η_i → 1}]]
```

Out[•]=

$$\frac{\xi^2\,\epsilon}{4}+\frac{1}{72}\xi^2\left(9+10\,\xi\right)\epsilon^2+\frac{1}{48}\xi^2\left(2+8\,\xi+5\,\xi^2\right)\epsilon^3+\frac{1}{43\,200}$$
$$\xi^2\left(450+5300\,\xi+9375\,\xi^2+3972\,\xi^3\right)\epsilon^4+\frac{1}{2880}\xi^2\left(6+200\,\xi+770\,\xi^2+828\,\xi^3+259\,\xi^4\right)\epsilon^5+$$
$$\frac{1}{1\,270\,080}\xi^2\left(441+41\,650\,\xi+318\,255\,\xi^2+661\,206\,\xi^3+492\,744\,\xi^4+119\,904\,\xi^5\right)\epsilon^6+$$
$$\frac{1}{241\,920}\xi^2\left(12+3248\,\xi+47\,390\,\xi^2+171\,780\,\xi^3+231\,315\,\xi^4+128\,636\,\xi^5+25\,248\,\xi^6\right)\epsilon^7+$$
$$\Big(\xi^2\left(2700+2\,119\,800\,\xi+58\,164\,750\,\xi^2+350\,392\,392\,\xi^3+767\,043\,060\,\xi^4+\right.$$
$$\left.737\,978\,760\,\xi^5+321\,401\,445\,\xi^6+52\,262\,840\,\xi^7\right)\epsilon^8\Big)\Big/435\,456\,000+$$
$$\frac{1}{14\,515\,200}\xi^2\left(10+23\,000\,\xi+1\,182\,500\,\xi^2+11\,542\,272\,\xi^3+38\,978\,926\,\xi^4+58\,259\,992\,\xi^5+\right.$$
$$\left.42\,572\,278\,\xi^6+15\,026\,440\,\xi^7+2\,066\,713\,\xi^8\right)\epsilon^9+\frac{1}{31\,614\,105\,600}$$
$$\xi^2\left(2178+14\,783\,780\,\xi+1\,427\,337\,780\,\xi^2+22\,271\,393\,100\,\xi^3+112\,694\,600\,172\,\xi^4+247\,836\,297\,060\,\xi^5+\right.$$
$$\left.272\,526\,046\,617\,\xi^6+157\,753\,926\,176\,\xi^7+46\,300\,580\,667\,\xi^8+5\,476\,171\,542\,\xi^9\right)\epsilon^{10}+$$
$$\frac{1}{1\,916\,006\,400}\xi^2\left(12+241\,648\,\xi+44\,032\,450\,\xi^2+1\,090\,760\,220\,\xi^3+8\,128\,864\,205\,\xi^4+25\,500\,050\,268\,\xi^5+\right.$$
$$\left.39\,918\,221\,112\,\xi^6+33\,959\,649\,636\,\xi^7+16\,059\,945\,704\,\xi^8+3\,998\,677\,780\,\xi^9+412\,245\,145\,\xi^{10}\right)\epsilon^{11}+$$
$$\frac{1}{21\,419\,706\,147\,840\,000}\xi^2\left(11\,179\,350+670\,296\,435\,900\,\xi+231\,939\,809\,726\,625\,\xi^2+\right.$$
$$9\,094\,203\,407\,445\,156\,\xi^3+98\,779\,942\,030\,679\,910\,\xi^4+433\,679\,590\,452\,125\,160\,\xi^5+$$
$$935\,907\,687\,496\,601\,820\,\xi^6+1\,106\,124\,467\,421\,713\,740\,\xi^7+754\,867\,568\,179\,875\,150\,\xi^8+$$
$$\left.298\,611\,689\,843\,736\,360\,\xi^9+64\,093\,793\,060\,832\,990\,\xi^{10}+5\,825\,192\,855\,557\,320\,\xi^{11}\right)\epsilon^{12}+$$
$$\frac{1}{10\,461\,394\,944\,000}\xi^2\left(420+75\,166\,000\,\xi+49\,705\,938\,100\,\xi^2+3\,082\,892\,941\,128\,\xi^3+\right.$$
$$48\,494\,865\,853\,434\,\xi^4+294\,365\,068\,268\,128\,\xi^5+858\,355\,827\,785\,742\,\xi^6+1\,363\,784\,880\,063\,320\,\xi^7+$$
$$1\,268\,844\,142\,949\,955\,\xi^8+713\,857\,632\,348\,432\,\xi^9+240\,658\,349\,843\,054\,\xi^{10}+$$
$$\left.45\,119\,920\,192\,144\,\xi^{11}+3\,649\,853\,205\,820\,\xi^{12}\right)\epsilon^{13}+\frac{1}{188\,305\,108\,992\,000}$$
$$\xi^2\left(540+288\,943\,800\,\xi+367\,381\,205\,100\,\xi^2+36\,073\,867\,513\,320\,\xi^3+818\,684\,326\,780\,320\,\xi^4+\right.$$
$$6\,815\,559\,843\,995\,760\,\xi^5+26\,501\,281\,404\,910\,455\,\xi^6+55\,442\,174\,856\,059\,420\,\xi^7+$$
$$68\,014\,106\,966\,359\,983\,\xi^8+51\,391\,001\,205\,334\,050\,\xi^9+24\,349\,599\,716\,660\,556\,\xi^{10}+$$
$$\left.7\,102\,293\,358\,359\,984\,\xi^{11}+1\,175\,999\,865\,003\,648\,\xi^{12}+85\,368\,200\,429\,264\,\xi^{13}\right)\epsilon^{14}+$$
$$\frac{1}{125\,536\,739\,328\,000}\xi^2\left(24+38\,438\,496\,\xi+94\,493\,577\,420\,\xi^2+14\,714\,989\,085\,160\,\xi^3+\right.$$
$$480\,797\,675\,540\,910\,\xi^4+5\,460\,132\,942\,576\,312\,\xi^5+28\,057\,093\,281\,461\,244\,\xi^6+$$
$$76\,225\,647\,750\,176\,496\,\xi^7+120\,707\,977\,700\,625\,744\,\xi^8+118\,423\,193\,849\,618\,944\,\xi^9+$$
$$74\,442\,373\,028\,096\,359\,\xi^{10}+30\,217\,710\,496\,318\,332\,\xi^{11}+7\,721\,746\,872\,071\,284\,\xi^{12}+$$
$$\left.1\,139\,790\,826\,275\,836\,\xi^{13}+74\,781\,421\,888\,776\,\xi^{14}\right)\epsilon^{15}+O[\epsilon]^{16}$$