Here is a truncated version of the generating function g(x) for the partition numbers $p_0, p_1, p_2, p_3, \ldots$..

It is identical to g(x) except that the powers of x exceeding 10 are omitted. Thus the coefficient of x^n equals p_n only for $0 \leqslant n \leqslant 10$.

If $n > 10$, then not all partitions are counted. For example, the highest power x^{87} has a coefficient of 1, indicating that the polynomial counts only one partition of 87. What partition is this? It comes from the highest powers of x in each factor: 10, 10, 9, 8, 10, 6, 7, 8 9,10. This coreesponds to the partition consisting of 10 1's, 5 2's, 3 3's, 2 4's, 2 5's, 1 6, 1 7, 1 8, 1 9 and 1 10, namely:

87 = 1+1+1+1+1+1+1+1+1+1+2+2+2+2+2+3+3+3+4+4+5+5+6+7+8+9+10.

```
Expand[(1 + x + x^2 + x^3 + x^4 + x^5 + x^6 + x^7 + x^8 + x^9 + x^10) (1 + x^2 + x^4 + x^6 + x^8 + x^10)
  (1 + x^3 + x^6 + x^9) (1 + x^4 + x^8) (1 + x^5 + x^10) (1 + x^6) (1 + x^7) (1 + x^8) (1 + x^9) (1 + x^10)]
```

$$1 + x + 2x^{2} + 3x^{3} + 5x^{4} + 7x^{5} + 11x^{6} + 15x^{7} + 22x^{8} + 30x^{9} + 42x^{10} + 54x^{11} + 70x^{12} + 91x^{13} + 116x^{14} + 145x^{15} + 181x^{16} + 222x^{17} + 270x^{18} + 325x^{19} + 386x^{20} + 454x^{21} + 529x^{22} + 616x^{23} + 707x^{24} + 805x^{25} + 910x^{26} + 1022x^{27} + 1135x^{28} + 1255x^{29} + 1374x^{30} + 1497x^{31} + 1618x^{32} + 1741x^{33} + 1856x^{34} + 1966x^{35} + 2069x^{36} + 2165x^{37} + 2246x^{38} + 2319x^{39} + 2379x^{40} + 2425x^{41} + 2456x^{42} + 2473x^{43} + 2473x^{44} + 2456x^{45} + 2425x^{46} + 2379x^{47} + 2319x^{48} + 2246x^{49} + 2165x^{50} + 2069x^{51} + 1966x^{52} + 1856x^{53} + 1741x^{54} + 1618x^{55} + 1497x^{56} + 1374x^{57} + 1255x^{58} + 1135x^{59} + 1022x^{60} + 910x^{61} + 805x^{62} + 707x^{63} + 616x^{64} + 529x^{65} + 454x^{66} + 386x^{67} + 325x^{68} + 270x^{69} + 222x^{70} + 181x^{71} + 145x^{72} + 116x^{73} + 91x^{74} + 70x^{75} + 54x^{76} + 42x^{77} + 30x^{78} + 22x^{79} + 15x^{80} + 11x^{81} + 7x^{82} + 5x^{83} + 3x^{84} + 2x^{85} + x^{86} + x^{87}$$