```
In[1]:= Prod[vec_] := Product[vec[[i]], {i, 1, Length[vec]}]

In[148]:= prms = Permute[Range[9], SymmetricGroup[9]];
totpart = IntegerPartitions[9]
(* only 4 primes less than 1 , no 9 dgt primes are pandigital*)
totpart = Delete[totpart, {{1}, {18}, {25}, {28}, {29}, {30}}]
(* Primes less than 10^9 *)
pms = Table[Prime[i], {i, 1, 5 800 000}];
pdgt = Table[0, {i, 1, 9}];
(* Note we can stop at i=
 8 since no 9 dgt primes are pandigital by problem 44 *)
For[i = 1, i ≤ 8, ++i,
  pdgt[[i]] =
    Select[pms, 10 ^ (i - 1) < # < 10 ^ i && Length[Intersection[IntegerDigits[#]]] == i &&
       Length[Position[IntegerDigits[#], 0]] == 0 &];
 ];
(* Length of primes with a given number of digits *)
len = Map[Length, pdgt];
lst = {};
For[k = 1, k ≤ Length[totpart], k++,
  tmp = totpart[[k]];
  ends1 = len[[tmp]];
  nums = Block[{a, lims}, lims = Table[{a[i], 1, ends1[[i]]}, {i, Length[ends1]}];
    Table[Table[pdgt[[tmp[[i]], a[i]]], {i, 1, Length[tmp]}],
     Evaluate[Sequence @@ lims]]];
  nums = Partition[Flatten[nums], Length[tmp]];
  For[i = 1, i ≤ Length[nums], ++i,
   If[Length[Intersection[Flatten[Map[IntegerDigits, nums[[i]]]]]] == 9,
     lst = Append[lst, nums[[i]]];
    ];
  ];
 ];
Length[Intersection[Map[Sort, lst]]]

Out[149]= {{9}, {8, 1}, {7, 2}, {7, 1, 1}, {6, 3}, {6, 2, 1}, {6, 1, 1, 1},
 {5, 4}, {5, 3, 1}, {5, 2, 2}, {5, 2, 1, 1}, {5, 1, 1, 1, 1}, {4, 4, 1},
 {4, 3, 2}, {4, 3, 1, 1}, {4, 2, 2, 1}, {4, 2, 1, 1, 1}, {4, 1, 1, 1, 1, 1},
 {3, 3, 3}, {3, 3, 2, 1}, {3, 3, 1, 1, 1}, {3, 2, 2, 2}, {3, 2, 2, 1, 1},
 {3, 2, 1, 1, 1, 1}, {3, 1, 1, 1, 1, 1, 1}, {2, 2, 2, 2, 1}, {2, 2, 2, 1, 1, 1},
 {2, 2, 1, 1, 1, 1, 1}, {2, 1, 1, 1, 1, 1, 1, 1}, {1, 1, 1, 1, 1, 1, 1, 1, 1}}

Out[150]= {{8, 1}, {7, 2}, {7, 1, 1}, {6, 3}, {6, 2, 1}, {6, 1, 1, 1}, {5, 4}, {5, 3, 1},
 {5, 2, 2}, {5, 2, 1, 1}, {5, 1, 1, 1, 1}, {4, 4, 1}, {4, 3, 2}, {4, 3, 1, 1},
 {4, 2, 2, 1}, {4, 2, 1, 1, 1}, {3, 3, 3}, {3, 3, 2, 1}, {3, 3, 1, 1, 1}, {3, 2, 2, 2},
 {3, 2, 2, 1, 1}, {3, 2, 1, 1, 1, 1}, {2, 2, 2, 2, 1}, {2, 2, 2, 1, 1, 1}}

Out[157]= 44 680
```