

```

In[1]:= ClearAll[irrepdim]
irrepdim[lambdas__, n_, verbQ_ : False] :=
Module[{prodd = 1, prodb = 1, nrow = Length[lambdas], hb, db},
  For[i = 1, i ≤ nrow, i++,
    For[j = 1, j ≤ lambdas[[i]], j++,
      hb = (Length[Select[lambdas, # ≥ j &]] - i + 1) + lambdas[[i]] - j;
      prodb = prodb hb;

      db = n - i + j;
      prodd = prodd db;

      If[verbQ, Print["Box b={" <> ToString[i] <> ", " <> ToString[j] <>
        "} has d(b)={" <> ToString[db] <> " and h(b)={" <> ToString[hb]"];
    ]];
  ];

  prodd / prodb
]

In[3]:= irrepdimSU3[lambdas__] := irrepdim[lambdas, 3]

In[4]:=

In[5]:= (* (2,1) ⊗ (2,1) *)
irrepdimSU3 /@ {{2, 1}, {2, 1}}
Times @@ %
irrepdimSU3 /@
{{4, 2}, {4, 1, 1}, {3, 3}, {3, 2, 1}, {3, 2, 1}, {3, 1, 1, 1}, {2, 2, 2}, {2, 2, 1, 1}}
Plus @@ %

Out[5]= {8, 8}

Out[6]= 64

Out[7]= {27, 10, 10, 8, 8, 0, 1, 0}

Out[8]= 64

In[9]:= (* (2,1) ⊗ (1,1) *)
irrepdimSU3 /@ {{2, 1}, {1, 1}}
Times @@ %
irrepdimSU3 /@ {{3, 2}, {3, 1, 1}, {2, 2, 1}}
Plus @@ %

Out[9]= {8, 3}

Out[10]= 24

Out[11]= {15, 6, 3}

Out[12]= 24

```