

## Puzzle Activity 58

1.  ${}^7P_3 = \boxed{210}$

6.  ${}^7P_7 = \boxed{5040}$

2.  ${}^7P_4 = \boxed{840}$

7.  ${}^7C_7 = \boxed{1}$

3.  ${}^7C_3 = \boxed{35}$

8.  ${}^7P_1 = \boxed{7}$

4.  ${}^7C_4 = \boxed{35}$

9.  ${}^7C_1 = \boxed{7}$

5.  ${}^4P_7 = \boxed{0}$

10.  ${}^7C_0 = \boxed{1}$

11.  ${}^5P_5 = \boxed{5!} = 120$

12.  $\boxed{5^5} = 3125$

13.  $\boxed{{}^5P_3} = \frac{5!}{2!} = 60$

14.  $\boxed{5^3} = 125$

15.  $\boxed{{}^5C_3} = 10$

16.  $\boxed{{}^{24}P_3} = 12144$

17.  $\boxed{{}^{24}C_3} = 2024$

18.  ${}^{14}C_3 \cdot {}^{10}C_3$

19.  ${}^{14}C_3 + {}^{10}C_3$

20.  ${}^{24}P_{24} = \boxed{24!}$

21.  ${}^5P_5 = \frac{5!}{3!}$

↑  
3 D's repeated

22.  $\frac{10!}{3!3!2!}$

↑ ↑ ↑  
3 5's 3 2's 2 1's