Calculate the given expression.

1. $0!$

2. $5!$

3. $\frac{5!}{0!}$

4. $\frac{7!}{5!}$

5. $\frac{100!}{99!}$

6. $\frac{8!}{(8-5)!}$

7. $\frac{7!}{2!\cdot 3!}$

8. ${}_{10}P_0$

9. ${}_6P_2$

10. ${}_{10}P_1$

11. Five separate people are to be seated in five chairs that are placed in a straight row. How many different arrangements of the five people in the five chairs are possible?

12. Ten separate people are to be seated in eight chairs that are placed in a straight row. How many different arrangements of the ten people in the eight chairs are possible?

13. How many different 10-letter arrangements of the 10 letters in the word *statistics* are possible?

14. How many different ways can a club of 25 members select a president, vice-president, and secretary from its membership if no person holds more than one office and all members are eligible for any one of the three positions?

15. How many six-digit (zero through nine) passwords are possible if repetition of digits is not allowed?