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LESSON
11.2

## Challenge Practice

## In Exercises 1-8, simplify the expression.

1. ${ }_{n} P_{1}$
2. ${ }_{n} P_{n}$
3. ${ }_{n} P_{2}$
4. ${ }_{n} P_{n-1}$
5. ${ }_{n} P_{0}$
6. ${ }_{n} P_{3}$
7. ${ }_{n} P_{n-2}$
8. ${ }_{n} P_{n-3}$

## In Exercises 9-12, use the following information.

Suppose there are 25 students in your math class, and the teacher assigns the seating at random in five rows each containing five students.
9. What is the probability that you sit in the first seat in the front row and your best friend sits immediately next to you?
10. What is the probability that you sit on either end of a row and your best friend sits immediately next to you?
11. The teacher forms five groups by combining the students in each row into one of five groups. Suppose the groups are sent to the board, in random order, to work a problem. What is the probability your group goes to the board last?
12. What is the probability that you and your best friend are in the same row?

