

Lesson 6 Skills Practice

Permutations

Find each value. Use a calculator if needed.

1. $P(2,2)$

$$2 \times 1 = 2$$

2. $P(4,3)$

$$4 \times 3 \times 2 = 24$$

3. $P(5,4)$

$$5 \times 4 \times 3 \times 2 = 120$$

4. $P(9,5)$

$$9 \times 8 \times 7 \times 6 \times 5 = 15,120$$

5. $P(8,7)$

$$8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 = 40,320$$

6. $P(12,7)$

$$12 \times 11 \times 10 = 1,320$$

7. $P(11,3)$

$$11 \times 10 \times 9 = 990$$

8. $P(10,4)$

$$10 \times 9 \times 8 \times 7 = 5,040$$

9. $P(6,5)$

$$6 \times 5 \times 4 \times 3 \times 2 = 720$$

10. $P(5,3)$

$$5 \times 4 \times 3 = 60$$

11. $P(7,4)$

$$7 \times 6 \times 5 \times 4 = 840$$

12. $P(6,4)$

$$6 \times 5 \times 4 \times 3 = 360$$

13. How many ways can you arrange the letters in the word *prime*?

25 ways

14. How many ways can you arrange 8 different crates on a shelf if they are placed from left to right?

$$8 \times 8 = 64 \text{ ways}$$