

Watch. Practice. Understand. | Lesson 146

Chapter 10 Review Fundamental Counting Principal and Permutation

Watch the matching video: <https://www.youtube.com/watch?v=k6XtMAzP4Z8>

Practice focus: Counting, permutations and combinations

Original extra practice matched to the listed lesson topic.

Name: _____ Date: _____ Show your reasoning and check units.

01 How many 3-letter codes use distinct letters from A, B, C, D, E?

02 How many committees of 3 can be selected from 8 people?

03 A meal has 3 main-course choices, 4 sides and 2 drinks. Count combinations.

04 How many distinct arrangements of the letters LEVEL exist?

Worked answers | Lesson 146

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01 How many 3-letter codes use distinct letters from A, B, C, D, E?

Order matters: $5 \times 4 \times 3 = 60$.

02 How many committees of 3 can be selected from 8 people?

Order does not matter: $C(8, 3) = 8!/(3!5!) = 56$.

03 A meal has 3 main-course choices, 4 sides and 2 drinks. Count combinations.

Multiplication principle: $3 \times 4 \times 2 = 24$ meals.

04 How many distinct arrangements of the letters LEVEL exist?

Five letters with two L's and two E's: $5!/(2!2!) = 30$.