Time Frame: 50 minutes

Subject Matter: Permutation Rule

Anticipatory Set:

Evaluate

1. 3P3
2. 11P7

Objective: TSWBAT solve real life problems using the permutation rule.

Standards: DA – 5.2 Use counting techniques to determine the number of possible outcomes for an event.

Materials: PowerPoint Presentation and Worksheets

SHOW ME

Presentation of Information:

Example 1:

A television news director wishes to use three news stories on an evening show. One story will be the lead story, one will be the second story, and the last will be the closing story. If the director has a total of 8 stories to choose from, how many possible ways can the program be set up?

Example 2:

How many different ways can a chairperson and an assistant chairperson be selected for a research project if there are seven scientist available?

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LET ME TRY

Solve the following.

1. How many different 4-color code stripes can be made on a sports car if each code consists of the colors green, red, blue, and white?
2. An inspector must select three tests to perform in a certain order on a manufactured part. He has a choice of 7 tests. How many ways can he perform 3 different tests?
3. Anderson Research Co. decides to test-market a product in 6 areas. How many different ways can 3 areas be selected in a certain order for the first test?
4. How many different ways can a city building inspector visit 6 buildings in the city if she visits them all in 1 day?
5. How many different 4-letter permutations can be formed from the letters in the word *decagon*?

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CLASSWORK

Solve the following.

1. In a board of directors composed of 8 people, how many ways can 1 chief executive, 1 director, and 1 treasurer be selected?
2. How many different ID cards can be made if there are 6 digits on a card and no digits can be used more than once?
3. How many different ways can 5 Public Service announcements be run during one hour time?
4. How many different ways can 4 tickets be selected from 50 tickets if each ticket wins a different prize?
5. How many different ways can a researcher select 5 rats from 20 rats and assign each to a different test?

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