

Review Practice

COMBINATIONS

Complete the following problems.

- #1** There are 10 Martians at the launchpad waiting to get on a flight to Zerbos. How many ways can 6 Martians be selected for the flight if there are no seats and they must stand? (That is, order doesn't matter.)
- #2** In a group of 6 Martians and 4 Zorbosians, five children are to be selected to run in the Galaxy Race. In how many ways can they be selected?
- #3** Rowyn has 5 new boxes of cereal in her cabinet. How many ways can she choose 3 to open so she can feed her study group?
- #4** Fifteen indistinguishable and equally qualified Martians recently finished their training to work at the spaceport. There are openings in the Security Division, Science Division, Engineering Division, Medical Division, and Administrative Division. How many ways are there to divide the group of 15 Martians among the 5 divisions for work?
- #5** A standard deck of Martian playing cards comes with 36 distinct cards. How many different hands of 6 cards can be dealt?
- #6** Melateebo and Gromky the Martians go to Mochalo's Department Store to purchase antennae warmers. Melateebo wants to buy 4 different colored pairs, and Gromky wants to buy 2 different colored pairs. Mochalo's antennae warmers are available in 6 different colors.
- How many combinations can Melateebo purchase?
 - How many combinations can Gromky purchase?
 - What do you notice about these two numbers?
- #7** Seven Martians meet up and shake hands to greet each other. If each Martian shook hands with each of the other Martians, how many handshakes took place?

EXTRA CHALLENGE

- #8** Ruby is taking a 2 day trip. If she has 7 shirts and 8 pairs of shorts, in how many ways can she select 2 shirts and 2 pairs of shorts to take on her trip?