Name_____ 11.1-11.3 Group Work

1-15 **Show work**.

_____1) How many ways can a president, vice president, and treasurer be selected from a group of 20 people?

_____2) How many six-member basketball teams can be formed from a group of 10 people without regard to the position played by each member?

_____3) How many seven-digit phone numbers can be formed if the first digit cannot be zero?

_____4) In how many ways can 6 different books be placed side by side on a bookshelf?

_____5) A truck comes in 6 sizes, 5 exterior colors, 3 interior colors, with or without a CD player, and with or without mud flaps. How many different trucks can be made?

_____6) A football team has 6 basic plays. How many ways could 3 plays be called?

_____7) How many 3-topping pizzas can be made if there are 15 toppings from which to choose? (Each topping must be different.)

_____8)A test has 6 multiple-choice questions. Each question has a choice of 5 answers. In how many ways can this test be answered?

_____9) You have 10 different cookies. You plan to put 3 of them in a bag and give those to your favorite math teacher. How many different bags of cookies are possible?

_____10) A history class plans to send 4 of its 30 students to Arizona Close Up. In how many ways can a group of 4 be selected?

_____11) Ten horses are in a race. In how many ways can they come in 1^{st}, 2^{nd}, and 3^{rd} place?

_____12) To make a milkshake you need 3 different flavors of ice cream. How many different milkshakes are possible if there are 16 flavors of ice cream available?

_____13) How many ways can you display 8 books on a shelf if there are 3 identical math books, 3 identical science books, and 2 identical history books? (You're displaying all 8 books at the same time.)

_____14) In how many ways can you arrange the letters in TRIGONOMETRY?

_____15) The Common Core Committee must consist of 3 females and 3 males. If there are 12 females and 11 males interested in being on the committee, then how many committees are possible?