

MATH 1324 MLM Mid-Term Exam Formula Sheet

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$y = mx + b$$

$$y - y_1 = m(x - x_1)$$

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

In general, if n operations O_1, O_2, \dots, O_n are performed in order, with possible number of outcomes N_1, N_2, \dots, N_n , respectively, then there are

$$N_1 \cdot N_2 \cdot \dots \cdot N_n$$

possible combined outcomes of the operations performed in the given order.

A standard deck of 52 cards has four 13-card suits: diamonds, hearts, clubs, and spades. The diamonds and hearts are red, and the clubs and spades are black. Each 13-card suit contains cards numbered from 2 to 10, a jack, a queen, a king, and an ace. The number or letter on a card indicates its *rank*. So there are 13 ranks and 4 cards of each rank. The jack, queen, and king are called *face cards*. (The ace is *not* a face card.) Depending on the game, the ace may be counted as the lowest and/or the highest card in the suit. In traditional card games, a *hand* of cards is an unordered subset of the deck.