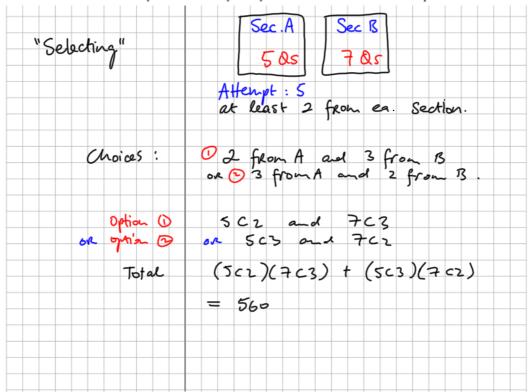
19. An examination paper consists of 12 questions, 5 in Section A and the remainder in Section B. A candidate must attempt 5 questions, at least 2 of which must be from each section. In how many different ways may the candidate select the 5 questions?

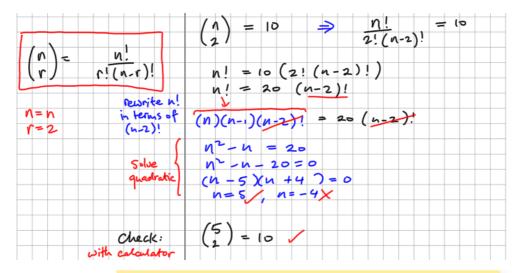


21. Find the value of $n \in N$ in each of the following:

(i)
$$\binom{n}{2} = 10$$

(ii)
$$\binom{n}{2} = 45$$

(i)
$$\binom{n}{2} = 10$$
 (ii) $\binom{n}{2} = 45$ (iii) $\binom{n+1}{2} = 28$



Combinations

The number of combinations of r objects, chosen from a set of *n* different objects, is denoted by $\binom{n}{r}$ where

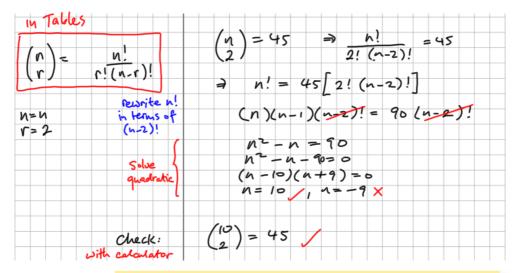
$$\binom{n}{r} = \frac{n(n-1)(n-2)\dots(n-r+1)}{r!} = \frac{n!}{r!(n-r)!}$$

21. Find the value of $n \in N$ in each of the following:

(i)
$$\binom{n}{2} = 10$$

(ii)
$$\binom{n}{2} = 45$$

(iii)
$$\binom{n+1}{2} = 28$$



Combinations

The number of combinations of r objects, chosen from a set of n different objects, is denoted by $\binom{n}{r}$ where

$$\binom{n}{r} = \frac{n(n-1)(n-2)\dots(n-r+1)}{r!} = \frac{n!}{r!(n-r)!}$$