I	Round Robin Tournament	Time limit: 2 sec

Problem:

In theory, a round-robin tournament is the fairest way to determine the champion among a known and fixed number of participants. Each participant, player or team, has equal chances against all other opposites. The element of luck is seen to be reduced as compared to a knockout system since bad performances need not cripple a competitor's chance of ultimate victory. Final records of participants are, thus, seen to be more accurate as they represent the results over a longer period against equal competition. This can also be used to determine which teams are the poorest performers and thus subject to relegation if the format is used in a multi-tiered league. This is also helpful to determine the final rank of all competitors from strongest to weakest for purposes of qualification for another stage or competition as well as for prize money. In team sport the (round-robin) major league champions is generally regarded as the "best" team in the land, rather than the (elimination) cup winners.

Moreover, in tournaments such as the FIFA or ICC world cups, a first round stage consisting of a number of mini round robins between groups of 4 teams guards against the possibility of a team travelling possibly thousands of miles only to be eliminated after just one poor performance in a straight knockout system. The top one, two, or occasionally three teams in these groups then proceed to a straight knockout stage for the remainder of the tournament.

The main disadvantage of a round robin tournament is the time needed to complete it. Unlike a knockout tournament where half of the participants are eliminated after each round, a round robin requires one round less than the number of participants if the number of participants is even, and as many rounds as participants if the number of participants is odd. For instance, a tournament of 16 teams can be completed in just 4 rounds (i.e. 15 matches) in a knockout format; a round-robin would require 15 rounds (i.e. 120 matches) to finish.

Other issues stem from the difference between the theoretical fairness of the round robin format and practice in a real event. Since the victor is gradually arrived at through multiple rounds of play, teams who perform poorly can be eliminated from title contention rather early on, yet they are forced to play out their remaining games. Thus games occur late in competition between competitors with no remaining chance of success. Moreover, some later matches will pair one competitor who has something left to play for against another who does not. It may also be possible for a competitor to play the strongest opponents in a round robin in quick succession while others play them intermittently with weaker opposition. This asymmetry means that playing the same opponents is not necessarily equitable: the same opponents in a different order may play harder or easier matches while other teams are presented with more adversity during periods of the competition. There is also no scheduled showcase final match. Only by coincidence would two competitors meet in the final match of the tournament where the result of that match determined the championship. A notable instance of this occurring was the May 26th, 1989 match between Arsenal and Liverpool.

Further issues arise where a round-robin is used as a qualifying round within a larger tournament. A competitor already qualified for the next stage before its last game may either not try hard (in order to conserve resources for the next phase) or even deliberately lose (if the scheduled next-phase opponent for a lower-placed qualifier is perceived to be easier than for a higher-placed one). Four pairs in the 2012 Olympics Women's doubles badminton having qualified for the next round, were disqualified for attempting to lose in the round robin stage to avoid compatriots and better ranked opponents. The round robin stage at the Olympics were a new introduction and potential problems were readily known prior to the tournament.

Swiss system tournaments attempt to combine elements of the round-robin and elimination formats, to provide a reliable champion using fewer rounds than a round-robin, while allowing draws and losses.

Now give you N teams. You have to tell how many matches are required to complete a round robin tournament?

Input:

At first gives you an integer T (T<=100000), is the number of test cases. Each case gives you a 64 bit unsigned integer X.

Output:

For every test case, print number of matches required to complete a round robin tournament.

Input	Output
2 3 5	3 10