Animation 8.1

This diagram shows a very simple operation with an entrance on the left and service point comprising a counter and server on the right. Depending on demand a queue will form. Some people in the queue will be happy to wait until they are served.

However, it may be that someone waiting in the queue for some time decides they can wait no loner and so leave before they are served. Such customers are called renaging customers.

In addition they may be people who join the end of the queue and then decide to leave. Such customers are referred to as balking customers. Often they join the queue for just a few seconds before changing their mind and deciding to move on.
Finally there are customers who would have joined the queue but decide not.

These are termed rejecting customers. It is likely that they have been put off by the length of the queue.
Understanding these behaviours is important as it provides feedback as to how well designed and managed the queuing system is. If customers renage, this is a sign that transaction time, ie how long it takes to process each customer is taking too long.

If customers balk or reject, this is sign that the queue is too long. Moreover by monitoring this behaviour the operations manager gets a much clearer picture of the strength of demand at any given point in time. If you staff the operation on the basis of how many customers are served, you may be underestimating demand.

For instance 30 customers served between 10.00 am and 11.00 am underestimates demand by 50% if 10 other people renaged, 10 more balked and another 10 rejected queuing. Next time you are in a queue, look out for these behaviours.