Take me out to the ballgame

Michael Doob
Department of Mathematics
University of Manitoba

July 25, 2016
PlayBall :=
    InningCount = 0
repeat
    InningCount++
    PlayInning
until InningCount == 9
while (ScoreTied)
    PlayInning

PlayInning :=
    AwayTeamBats
    HomeTeamBats
AwayTeamBats :=
    OutCount = 0
repeat
    NextAwayBatterUp
until OutCount == 3

HomeTeamBats :=
    OutCount = 0
repeat
    NextHomeBatterUp
until OutCount == 3
Take me out to the ballgame
TeX Users Group meeting—July 25, 2016
NextBatterUp :=
    StrikeCount = BallCount = 0
repeat
    Pitcher Throws
    if ! Batter Swings
        if Pitch Is Strike
            StrikeCount++
            if StrikeCount == 3
                OutCount++
                return
        else %PitchIsBall
            BallCount++
            if BallCount == 4
                Player Walks To First
                return
        else %BatterSwings
else %BatterSwings
  if BallMissed
    strike_count++
    if Strike_Count == 3
      OutCount++
      return
  return
else if BallCaughtInAir
  OutCount++
  return
else if BallLandsFoul
  if StrikeCount < 2
    StrikeCount++
  else RunnersMayAdvance
  return
A run is scored if a runner touches first base, second base, third base and home plate in that order. Home run: ball hit out of the park in fair territory.

A runner is out if

- Batter accumulates three strikes (a strike out)
- Batter hits ball that is caught before it hits the ground (fly out).
- Runner is tagged with ball while not touching a base.
- First base is tagged before runner reaches it.
  - A player on first base: second base tagged before the runner reaches it.
  - A player on first and second base: third base tagged before . . . .
- Runner on base doesn’t return to base after fly out.
Baseball expressions

- He hit it out of the ballpark.
- It’s just a ballpark figure.
- That idea is really bush league.
- It’s a brand new ball game.
- He covered all the bases.
- He threw us a curveball.
- I wish he wouldn’t grandstand.
- He really hit a home run.
- That really came out of left field.
- He’s really off base.
Baseball expressions

- He’s down to his last out.
- What a screwball idea!
- It’s a whole new ballgame.
- He’s way off base.
- I hope she’ll pinch hit for us.
- I’m sure he’ll step up to the plate.
- Let’s touch bases.
- She’s batting 1000 on that one.
- I went out on a date with her, and I didn’t even reach first base.
Take me out to the ballgame
Take me out to the crowd
Buy me some peanuts and crackerjack
I don’t care if I never get back
For it’s root, root, root for the home team
If they don’t win it’s a shame.
For its one, two, three strikes you’re out
At the old ball game.