Baseball Basics for Brits

Volume 5. Numbers and Statistics

This volume of *Baseball Basics for Brits* provides an introduction to the numbers and statistics you will encounter while watching ballgames or reading about the sport.

This includes:

- Team statistics e.g. win-loss record and winning percentage
- 'Game' statistics e.g. Line scores and Box scores
- Standard statistics for batters, base runners, pitchers and fielders
- An introduction to advanced statistical analysis, fantasy baseball stats and historical stats.

Statistics are important in all sports. A striker's value is weighed by the number of goals he scores just as a kicker in rugby is judged on his conversion success rate. Cricketers are subjected to even more statistical scrutiny. A batsman lives and dies by his average along with the number of fifties and hundreds he has scored (and also his strike rate in the shorter version of the game). A bowler is assessed by the number of wickets he takes, how many runs he concedes per over and his strike rate.

But the importance of statistics even in cricket pales in comparison to the integral role they play in baseball, whether from the perspective of a player, manager, general manager or fan.

Team statistics

Once the season has got under way, you will often find a team's name being followed in brackets by two numbers. *For example: Atlanta Braves (40-34)*. The numbers represent the team's **win-loss record**. In the above example, the Braves have won 40 games and lost 34. The win-loss record is pronounced by replacing the dash with "and", so an announcer would state that "the Atlanta Braves are forty and thirty-four on the season".

The win-loss record is normally accompanied by the team's **winning percentage**, which shows what percentage of the team's games they have won. In baseball, percentages are very rarely written in the standard way you would expect (e.g. 57%). Instead, they are written as three digit numbers preceded by a decimal point. Therefore, Atlanta's winning percentage in this example would be written as .571 and would be pronounced as "five seven one". If the percentage was .570, it would be pronounced as " five seventy".

The first sign to respectability for a team is to win as many games as you lose, finishing 81-81 and with a .500 winning percentage. This

figure is pronounced as **"five hundred"** and as the season draws to a close you will often hear some of the also-rans stating that they at least want to "reach five hundred". A team with a winning percentage above .500 is said to have a **"winning record"**, whereas a team below .500 has a **"losing record"**.

> There are no draws (or "ties" as Americans call them) in MLB and, as a result, teams do not play to win points; therefore teams can solely be judged on how many games they have won or lost. In MLB, each team plays 162 regular season games. Even an excellent team that wins one hundred games will still lose sixty-two times over the course of the season.

Game statistics and information

Scores

Baseball scores are published in the standard "Boston Red Sox 1 – 5 Oakland Athletics" format; however the teams are invariably stated in the opposite order to the British way. Whereas in Britain the above scoreline would indicate that the game was played in Boston, in the American method the 'away' team (or 'road' team) is stated first. The fixture would be referred to as "Boston at Oakland"; therefore the score is listed in that order.

Only in the most limited account of the game (e.g. the sort you would find in a British newspaper) would the score be recorded in such a bare fashion. A baseball game is typically recorded in two ways: a **line score** and a **box score**.

Line scores

A line score records the number of runs each team scored in their half of each inning, as well as the final score, the amount of hits each team accumulated and the number of errors they committed.

Looking at a line score helps to explain why people refer to each inning as being split into the **"top half of the inning"** and the **"bottom half of the inning"**. Note that the home team always bats in the bottom half.

	1	2	3	4	5	6	7	8	9	R	H	E
Boston	0	0	0	0	0	1	0	0	0	1	5	0
Oakland	0	1	3	0	0	0	0	1	X	5	9	1

The above line score is from 26 March 2008, when the Boston Red Sox faced the Oakland Athletics in the second game of the 2008 regular season. The column R (Runs) shows the final score: the A's won five runs to one.

The 'X' in Oakland's ninth inning (the 'bottom' of the inning) denotes that they did not come up to bat. When the home team is in the lead in the middle of the ninth inning (i.e. after the road team has had their final chance to score runs in the top of the inning), the game is over.

Box scores

Reading box scores has been a daily ritual of millions of baseball fans for over a century. They provide a statistical account of a game in a table form. The box score is effectively split into two, with the batting information first, followed by the pitching stats.

For the offense, a team's batting lineup (including any mid-game substitutions) is listed in the left hand column. Each player's row will tell you what they did during the game: which fielding position they played, how may hits they got, how many runs they scored etc. There is a separate table for each team's offense, followed by any relevant additional information (details of any stolen bases etc).

The process is then replicated for the two teams' pitchers. This will list the pitchers in the order in which they pitched, with details on how many innings they pitched, how many hits they gave up, how many runs/earned runs they allowed etc.

Box scores are similar to the scorecards you will see in cricket. Here, the batsmen are listed in their correct batting order alongside details such as how many runs they scored, how many

balls they faced, how many fours/sixes they hit etc. The bowlers' performances will be recorded in the same way, showing how many overs they bowled, how many runs they conceded, how many maidens they bowled, how many wickets they took, their economy rate etc.

> This similarity is more than just a mere coincidence. Henry Chadwick, the man enshrined in the baseball hall of fame as "the inventor of the box score", was born in Exeter, England in 1824. He was an incredibly influential figure in baseball during the second half of the nineteenth century after he moved to the States. His cricketing roots undoubtedly helped shape some of his thinking and are apparent in his lasting legacy on the game.

A full example of a box score is provided at the end of this volume in Appendix A.

Player Statistics

Box scores introduce us to the significant world of player stats. There are a vast amount of different statistics that record every aspect of a player's performance (both positive and negative). They can be broken down into batting statistics, base running statistics, pitching statistics and fielding statistics. We will take each category in turn, looking at the main statistics you will encounter and explaining any relevant 'scoring rules' as we go.

Batting Statistics

Batting average (AVG or BA)
If you see a three digit number (preceded by a decimal point) next to a batter's name, chances are it will be their batting average. A player's batting average shows how frequently a player gets a hit and is calculated simply by dividing the number of hits by the number of at-bats. So, if a player records thirty hits in 100 at-bats,

he has a batting average of .300. Hitting 'three hundred' (as it is pronounced) is the mark of a very good hitter, .270 is about average, .250 or below is poor, .400 is the holy grail that hasn't been reached since Ted Williams hit .4057 in 1941.

Batting average is seen by many as the main judge of a hitter's ability and the player with the best batting average in each league at the end of the season is said to have won the "**batting title**". However it is something of a controversial stat among some stat fans who dispute the idea that it is the best way to assess a hitter's contribution. The main limitations with the stat are that it doesn't take into account the ways a batter can contribute to the offense other than by getting a hit (e.g. via a walk or a hit by pitch etc) or what sort of hits are being accumulated (singles, doubles, triples or home runs). Consequently you will often see the AVG listed alongside two additional numbers that specifically take these factors into account: On-base percentage and Slugging Percentage.

On-base percentage (OBP)
Really an average rather than a percentage (you will sometimes see it referred to as on-base average) a player's on-base percentage shows how frequently a player gets on base, whether that's *via* a hit, a walk or a hit-by-pitch. While .300 is the key watermark for batting average, .400 is the equivalent mark for OBP.

Players with a good on-base percentage will generally be more patient hitters who are prepared to take their share of walks.

> The actual equation for OBP is:
>
> $$\frac{(\text{No. of Hits} + \text{No. of Walks} + \text{No. of HBPs})}{(\text{No. of At-bats} + \text{No. of Walks} + \text{No. of HBPs} + \text{No. of Sacrifice Flies})}$$
>
> *HBP = hit by pitch*

Slugging percentage (SLG)

As with OBP, this is actually an average even though it is almost always referred to as a percentage. A player's slugging percentage is only concerned with hits, but it differentiates between whether a hit was a single, double, triple or home run. You could say that SLG is a measure of total bases rather than merely hits. As the name suggests, the fact that this statistic measures total bases means that frequent home run hitters (i.e. 'sluggers') will have higher slugging percentages than a singles hitter. The 'quality' mark for SLG is .500.

> The actual equation for SLG is:
>
> $$\frac{(\text{No. of singles}) + (2 \times \text{No. of doubles}) + (3 \times \text{No. of triples}) + (4 \times \text{No. of home runs})}{\text{No. of At-bats}}$$

Note that while the highest AVG or OBP is 1.000, the highest possible SLG is 4.000. You would need to hit a home run during every at-bat to achieve this, so you will only ever see someone with a 4.000 if they've only had one or two at-bats.

As they all represent slightly different batting qualities, listing a player's AVG, OBP and SLG together provides a good way to assess how well a batter is performing and offers a snapshot on the *way* they are performing at the plate (e.g. a good AVG accompanied by a relatively low OBP suggests they are making good contact with the ball but are not drawing many walks).

When listed together, they will be displayed by putting a slash between them (.300/.400/.500). As a result, they are often referred to as **'slash statistics/numbers'**.

Counting stats

These averages/percentages are joined by so-called counting stats (i.e. stats that show how many times a player has achieved something during the season or their career). They can range from the number of hits (H), the number of walks (BB), the number of home runs (HR), number of strike outs committed (normally SO rather than K in this context) etc. The key thing to note is that as they are cumulative totals, they will go up as the season progresses or over the years of a player's career.

Most counting stats are self-explanatory, but it may be useful to provide some details for one of the most important...

Runs Batted In (RBI)

In football, the object of the game is to score goals; therefore the person who actually puts the ball in the back of the net gets credited with the goal from a personal standpoint. In baseball, the object of the game is to score runs, but apportioning personal credit is not quite so straightforward. The person who scores the run is the player who crosses home plate, yet he may not have been the player who actually got the hit that directly led to the run being scored.

Consequently, for each run scored, two individual stats are affected. The person who crosses the plate gets credited with a Run (R), while the person who batted in the run gets an RBI. These are also pronounced as **'ribbies'**. The batter gets an RBI for each run that crosses the plate as a result of his at-bat. So, if the batter hits a home run with two men on, he gets credited with 3 RBIs (one for knocking in each of the base runners and one for knocking in himself). If a run scores on a sacrifice fly, the batter still gets credited with an RBI even though he has made an out. A batter also gets an RBI if he receives a walk when the bases are loaded.

The most productive hitters in the Majors look to bat in 100 runs or more on the season.

At-Bats and Plate Appearances

Whenever a batter steps up to the plate, it goes down as a single plate appearance (unless the inning ends during the at-bat thanks to a base runner being put out, in which case the plate appearance is effectively voided and the batter starts from scratch in the next inning). Whether it gets recorded as an official at-bat depends on the outcome.

At-bats are a record of two things alone: did the batter get a hit or did he make an out? During the game (and when it is over) you will often see a batter's name followed by a figure such as '2-3'. The second number states how many at-bats the batter had during the game and the first number records how many hits he got. In this example, the player got two hits from his three official at-bats and the announcer will refer to the batter as having gone "two for three".

Yet as we have already seen from the on-base percentage statistic, a plate appearance might not end in an out or a hit. The batter may get on base *via* a walk or hit by pitch. They may also sacrifice themselves for the good of the team with a sacrifice bunt or fly. In these cases, the batter can't be credited with a hit, but at the same time it would be wrong to say they hadn't achieved anything; therefore these plate appearances do not count as at-bats and the outcomes are recorded separately.

Let's look at our 'two for three' player. If he played all nine innings, he probably would have made at least five plate appearances. If he had also walked once and laid down one successful sacrifice bunt, his actual performance would be recorded as him going "two for three with a walk and a sacrifice bunt".

> It's worth explaining this point because if a batter comes to the plate five times and gets four walks and a sacrifice fly, you may be left looking at the 0 in the at-bat column in a box score and wondering whether the player actually took part in the game!

This is also a good opportunity to remind you of the two main occasions when a batter hits the ball and gets on base, but doesn't get credited with a hit. If a player reaches on an error (explained in more detail below), he does not get credited with a hit. Similarly a player doesn't get credited with a hit if he reaches base on a **fielder's choice** (FC). A fielder's choice occurs when a batter gets on base because a fielder chooses to get another base runner out instead (normally meaning getting the 'lead' runner out – the person who will be closest to reaching home plate and therefore scoring a run). The fielder could have thrown the batter out had he wanted to; therefore the batter shouldn't get credited with a hit.

Example: if, in five plate appearances, a player strikes out twice, hits a double, gets a walk and reaches base once on a fielder's choice, it will go down as a 1-4 performance with a walk and a fielder's choice (the three 'outs' being the two strikeouts and the FC, and it only counts as four at-bats as one of the plate appearances ended in a walk).

Some other batting stats

OPS
OPS stands for **o**n-base percentage **p**lus **s**lugging percentage and the equation is as simple as it sounds (OBP + SLG = OPS). OPS has become popular relatively recently. It allows you to judge a player's ability to get on base and to hit for power all in one statistic. An average MLB OPS is around .790, with the best players reaching the .900 mark (or better).

RISP
RISP stands for **r**unners **i**n **s**coring **p**osition and this shows a batter's batting average in this situation (i.e. when there are runners on second and/or third base). The stat is linked to the concept of a batter '**hitting in the clutch**': being able to come through for the team in a pressure situation.

GIDP
GIDP (sometimes just GDP) is a counting stat that records how many times a batter has **g**rounded **i**nto a **d**ouble **p**lay.

Base running Statistics

Base running exploits are essentially recorded with two simple numbers, both relating to the process of stealing bases: the number of bases a player has stolen (abbreviated as SB) and the number of times the player has been caught out while trying to steal a base (abbreviated to CS for 'caught stealing').

The number of stolen bases is particularly important to fantasy owners, with SBs being a key offensive scoring category in most fantasy competitions.

However, to really judge the effectiveness of a base runner, you need to look at the amount of times the player gets caught out as well. Someone who can advance an extra base only really adds value to an offense if he can do so consistently without running himself out on the basepads.

A baseball team generally only has twenty-seven outs to play with in a game and using one or two of those up through reckless base stealing attempts will send a manager crazy. So, a base runner's base-stealing success percentage (SB%) is very important. Anything less than around a 75% success rate and you are doing more harm than good.

Base stealing in the Majors

Jose Reyes led the Majors with 78 steals in 2007 with Juan Pierre second on 64 and four other players on or just above the 50 mark. Reyes was caught stealing 21 times, giving him a success rate of 79%.

Typically there will be a small group of premium base stealers in the league, followed by a slightly larger group who will steal between 20-35 bases a year. The rest will chip in with a stolen base here or there.

Pitching Statistics

Winning and Losing pitchers
Once the season has got under way, when you read about a starting pitcher their name often will be followed by their win-loss record. For example: Johan Santana (5-1).

In every game, a pitcher from the winning team is credited with a **win** and a pitcher from the losing team is 'credited' with a **loss**. Although starting pitchers are often judged on their win totals, it will not necessarily be the starting pitchers who end up with the 'W' or the 'L'. Section 10.17 of the official rules determine who the official scorer will judge to be the '**pitchers of record**' (as they are known). The wording in the official rules is a bit complex, but we can provide a decent summary.

According to the official rules, the winning pitcher is the *"pitcher whose team assumes a lead while such pitcher is in the game, or during the inning on offense in which such pitcher is removed from the game, and does not relinquish such lead"*. The first bit is straightforward, but the two caveats might need explaining.

The "or during the inning on offense..." section relates to the situation when one pitcher finishes at the end of an inning and is replaced at the start of the next. Let's say Boston's Josh Beckett gets the third out to end the top half of the seventh inning and is then replaced by Hideki Okajima, who comes into the game for the top half of the eighth inning. The crucial point is of course that Boston's offense will come to bat for half an inning in between the pitching change. If Boston take the lead during the bottom half of the seventh, it is Beckett who is in line for the win as he is still the pitcher at that point.

The second caveat ("and does not relinquish the lead") means that as soon as the lead is relinquished, the win-loss decision starts again from scratch. The winning pitcher is determined when the winning team takes the *decisive* lead in the game. If Beckett pitched

seven innings and left with the Red Sox leading 2-0, he would be in line for the win at that point, but if that lead is relinquished (i.e. the bullpen gives up two runs or more) then he can no longer get the 'W' even if his team fights back and ultimately wins the game. The win would instead go to the relief pitcher who was the pitcher when the Red Sox took the decisive lead. Beckett would officially end up with a '**no decision**' (ND).

> The above example is one of the reasons why judging a starting pitcher on his win-loss record can be unfair.
>
> A pitcher can perform brilliantly, but, unless he pitches all of his team's innings, he will be reliant on his bullpen to help him get the win. And even if he does pitch all nine innings and gives up just one run, if his offense gives him no run support then the team will lose 1-0 and the pitcher will walk away with an 'L' for his troubles.

One other important point to note is that the starting pitcher can only get credited with a win if they pitch five full innings in a nine inning game.

As for the losing pitcher, the official rules simply state that *"a losing pitcher is a pitcher who is responsible for the run that gives the winning team a lead that the winning team does not relinquish"*.

Saves and Holds
As well as wins and losses, pitchers may also come out of the game with one of two other distinctions: a save or a hold.

Saves (S) are typically the stat that a team's closer is judged on, because their role is effectively determined by the rules on when a save is awarded. The closer is most commonly brought into a tight game when his team is winning to 'close' the game out and to 'save' the win.

For a pitcher to get credited with a save, he must have pitched at least one-third of an inning (i.e. he must have got one hitter out) and been the last person to pitch for the winning team (note that if this person is eligible for the win, he gets credited with the 'W' and a save is not awarded to any pitcher). If these two conditions apply, he will get the save if:

- his team were winning by three runs or less when he entered the game and he pitched for at least one inning,
- the potential tying run was either already on base or was one of the first two batters he faced when he entered the game,
- he pitched at least three innings.

If the pitcher enters the game in a save opportunity and gives up the lead, he will get lumbered with a **blown save** (BS). A top closer will not only rack up plenty of saves, he will do so by successfully converting a high percentage of his **save opportunities** (SVO).

Holds (HLD) are awarded to pitchers who successfully bridge the gap between the winning pitcher and the pitcher who gets the save. To get a hold, he must have entered the game in a potential save situation, recorded at least one out and left the game without relinquishing the lead.

Earned Run Average (ERA)
Racking up wins or saves is important to starters and relievers, but the main statistic their performances are judged against is their earned run average (ERA). This tells you how many earned runs a pitcher gives up on average over nine innings pitched. 4.50 is about the MLB average, 3.50 is very good, less than 3.00 is exceptional and 5.00 or above is poor.

Don't forget that as it is an average over nine innings, just one dreadful outing (e.g. only pitching two innings and giving up seven runs) can make a pitcher's ERA look terrible in the early part of the season. This is particularly the case for relief pitchers who might only pitch one inning (or less) in a game. If a reliever starts the season by pitching two innings

combined in three outings and gives up six runs in that time, their ERA will be 27.00! Conversely, a pitcher's ERA can be extremely low (e.g. 0.60) after five or six games if they pitch well. It's best to wait until mid-way through the season before drawing too many conclusions from a pitcher's ERA.

The 'E' at the start of the ERA is important because it highlights the fact that there are two types of runs when it comes to the pitcher's record: **runs** and **earned runs**. At a basic level, a run is said to be unearned if the base runner who reaches home plate either got on base due to an error or at some point was able to advance a base because of an error. The idea is that as an error played a part, the run was not 'earned' off the pitcher and therefore shouldn't count against the pitcher's record.

The issue of 'Inherited runs'
While inherited runs isn't a stat in itself, it is important to understand the rules as to which pitcher is responsible for any runs scored when more than one pitches in the same half of an inning.

If a pitcher is taken out of the game during an inning, he is still responsible for any potential runs he leaves on the bases until that half of the inning is over. The exception to this is if any of the potential runs is either caught stealing or picked-off. If they are out in this way (as opposed to being forced out, for example) the run(s) would no longer count against the original pitcher.

So, let's set the scenario of Beckett leaving the game during an inning with two men (Buck and Ellis) on base, being replaced by Okajima.

If Okajima subsequently gives up a home run to Barton, the opposing team would have scored three runs. Two of these runs will be charged against Beckett and one will be charged against Okajima.

If Barton gets aboard thanks to a fielder's choice, with Ellis forced out at second, and Sweeney then hits a three-run homer, two runs

count against Beckett and one against Okajima.

If Ellis is picked off at first, Okajima walks Barton and then gives up a three-run homer to Sweeney, one run counts against Beckett and two against Okajima.

Counting Stats
Just as the batters accumulate hits, runs, RBIs and such over the course of a season, there are various counting stats that are recorded for pitchers. Most common are the number of strikeouts (SO), walks issued (BB), hits given up (H), earned runs given up (ER), the number of people they have 'picked off' on the base pads (PO) and the number of innings pitched (IP).

Note that three outs add up to one inning pitched, so IP totals can often read .1 or .2, such as 32.1 (thirty-two and one third of an inning) or 17.2 (seventeen and two thirds of an inning).

'Per nine' stats
Many of the basic counting totals will be turned into averages that show how many are accumulated on average per nine innings pitched. For example: how many hits per nine (H/9), strikeouts per nine (K/9), walks per nine (BB/9). These are often referred to as 'peripheral stats'. They allow you to focus on a pitcher's actual performance away from the external factors (e.g. run support) that can influence other stats such as wins.

Some other pitching stats

WHIP
This stat tells you how many **w**alks and **h**its a pitcher gives up on average per **i**nning **p**itched. As with the 'per nine' stats, it measures the pitcher's actual performance. WHIP is a standard fantasy baseball statistic. Anything lower than a 1.20 WHIP is extremely good, while 1.40 is about average.

SO/BB ratio
The ideal pitcher is someone who can strike out a lot of batters, while not walking many. The strikeout/walk ratio basically shows how many

strikeouts the pitcher gets for every walk issued. The best pitchers will have a ratio of 4:1 or more; a good average is 3:1.

Fielding Statistics

Errors

The main fielding statistic that is referred to records the amount of times a player has committed an error (abbreviated as an E). In every sport, no matter how skilful the players are and how much hard work they dedicate to their craft, mistakes are made. The players are only human and particularly when MLB players participate in so many games, the errors can quickly start to mount up.

In baseball, every individual play is recorded and somebody has to either receive the credit or take the blame. If a batter smashes a groundball between the shortstop and the third baseman, he will naturally be awarded with a hit. The batter has reached base through his own efforts; therefore he gets the credit. However, what happens if the batter strokes a seemingly easy ground ball at the shortstop who then fails to gather it cleanly? The batter still gets to first base, but that's only because the fielder made a mistake. In this case, the batter doesn't get credited with a hit (as mentioned in the Batting statistics section) and the fielder takes the blame by being awarded an error.

It is the game's **official scorer** who will determine whether an error should be charged against a player or not. To some extent this will be a matter of subjective opinion, although at Major League level the approach is fairly consistent.

Each case has to be judged on its own merits, but the crucial point the scorer takes into account is whether they would expect a player to have been able to complete the play successfully. The terminology used in the rule book is "**ordinary effort**": in other words if you would have ordinarily expected a fielder to have completed the fielding play successfully, he should get an error if he doesn't. Essentially there are two types of errors: allowing a runner to advance due to throwing the ball wildly, and allowing a runner to advance by not fielding (catching/stopping) the ball successfully. Both are simply recorded as one E.

Putouts

A fielder gets credited with a 'putout' (PO) if their actions directly 'put out' a base runner. When a centre fielder catches a fly ball, he has put out the batter and gets 1 PO. If a base runner tries to steal second and the shortstop tags him out, the shortstop gets credited with a PO. If the second baseman scoops up a ground ball, throws the ball to the first baseman and he either tags the runner or 'beats' the runner to the base (by touching first base with his foot while holding the ball), the runner is out. As it was the first baseman who actually put the runner out, they get the credit for the PO.

Assists

Upon reading that final example, you may be thinking that the second baseman deserves some credit as well. Without him collecting the ball and making a good throw to the first baseman, the runner would have reached base. The first baseman might have put the runner out, but only after assistance by the second baseman.

To account for this, there is a category for assists. A fielder gets an assist (A) if their throw results in a putout, or if they deflect a ball (after it has either been hit or thrown) and it leads to a putout. Note that a player will get the credit for an assist even if the runner isn't putout due to an error by the receiving fielder.

Fielding percentage

As you would have come to expect by now, the data relating to fielding performances is rolled into a percentage stat. A player's fielding percentage tells you how successful they have been at converting chances into results.

If you are directly involved in a fielding play that resulted in a base runner being put out (or would have resulted in a base runner being put out had an error not been committed), you

either get credit for an assist or a putout, or you commit an error. The equation from there is quite simple. Add the number of assists, putouts and errors together and you get the total number of fielding opportunities a player has had. Add together the number of assists and putouts (i.e. the total number of times the fielder successfully completed the play) and divide it by the total number of opportunities and you get a fielding percentage.

Example: Derek Jeter had 300 fielding opportunities, of which he made 200 assists, 93 putouts and 7 errors. 293 (A + PO) divided by 300 (A + PO + E) = a .976 fielding percentage.

Passed balls and wild pitches

On occasions, a pitcher will throw to home plate and the ball will elude the catcher. If this results in a base runner being able to advance a base, blame is apportioned to either the pitcher or the catcher. Which one gets the blame depends on who the official scorer deems to have been at fault.

If it is deemed to have been the pitcher's fault, the play will be listed as a wild pitch (WP) and if it was the catcher's fault it will be called a passed ball (PB). The official scorer makes the call and it follows the same theory as used for errors. If a catcher could have controlled the ball with ordinary effort, it will be called a passed ball. If the pitch was so wide/high/low that the catcher didn't have much of a chance of stopping it, the scorer calls it a wild pitch.

There are two important things to note here. Firstly, the scorer only makes a ruling if a baserunner advances as a result of the mistake. If there are no runners on base, no one can gain an advantage as a result of the ball going astray; therefore there is no need to apportion blame.

Secondly, although you might refer to a wild pitch or a passed ball as an 'error', it is not officially recorded as one in that sense. It just gets listed as either a WP or a PB and not as an E as well.

Cricket fans will be familiar with the concept of differentiating between a pitcher or a catcher being at fault. If a bowler sends a delivery down the track that the wicket keeper can't get near (e.g. a 'Steve Harmison special'), the umpire calls it a 'wide' and this counts against the bowler's record. If the bowler bowls a decent delivery but the ball runs away for 'extras', the umpire declares them to be 'byes' and this counts against the wicket keeper's record (on the basis that he could have, and should have, stopped the ball).

Catcher specific: stolen bases/caught stealing

Catchers are the fielder primarily responsible for stopping the opposing team from stealing bases. In the catcher's fielding statistics, you will see categories for stolen bases (SB) and caught stealing (CS). As you would expect, an SB means a base was stolen against the catcher (therefore a negative) and a CS means that the catcher threw the base runner out (therefore a positive). In much the same way that these two stats are put together to produce a stolen base success rate for base runners, the stats are put together to show how successful a catcher has been at stopping potential base stealers.

The concept of recording every stolen base against the catcher's record is unfair at times. If a pitcher has a relatively slow delivery, a skilled base runner will be able to get a big head start (a **'jump'**) and leave the catcher with very little chance of catching the delivery and then throwing it to the correct base in time. In these cases, the announcers will often state that the runner 'stole the base on the pitcher', but it still goes down as a SB against the catcher.

As scary as it may sound, the above is only the tip of the iceberg when it comes to player statistics. Spend ten minutes looking around the stats section on MLB.com and then move on to baseball-reference.com and you'll soon discover that there are stats for pretty much everything. How far you delve into it is entirely your own choice.

Advanced statistical analysis

We've deliberately focused on the most common stats that you will come across: those mentioned on TV broadcasts of games and in reports and articles about the sport. There is a whole world beyond this that goes under the name of **sabermetrics**. The 'saber' part relates to the acronym of the Society for American Baseball Research (SABR). Those involved endeavour to use statistical research and analysis as a means to gain new objective knowledge about the sport.

In many cases, this sees them challenging conventional baseball wisdom, which doesn't always make them popular with traditionalists and those who have played the game. The SABR crowd can be included in the group of "some people" mentioned earlier that don't value batting average as a particularly useful stat (when used on its own at least).

Their studies have in part produced a horde of new statistics, designed to better evaluate players' performances. Not least of these is the aforementioned WHIP. The spiritual leader of sabermetrics is Bill James (now a consultant to the Red Sox) and his many disciples include the people at Baseball Prospectus.com.

If you are already the sort of person who takes an interest in statistical research, there are many great books and websites that you can dive in to. Understandably, some of the sabermetric studies can be very heavy going for baseball fans who otherwise are not drawn to dry maths books filled with long complicated equations. The best sabermetric exponents are those that can communicate their findings and arguments in a way that is both easy to understand and enjoyable to read. Bill James and Baseball Prospectus fall into this category and even people who are normally inclined to shy away from statistical research will benefit from learning about their work.

Fantasy baseball

The popularity of baseball statistics feeds the popularity of fantasy baseball, and vice versa. The most well-known form of the game is sometimes referred to as **Rotisserie baseball**. 'Roto' leagues generally follow the same basic rules. Where they differ is in the number of stats that are taken into account.

A 4x4 league uses four batting stats (home runs, RBIs, stolen bases and the team's batting average) and four pitching stats (the team's ERA, the team's WHIP, wins and saves).

A 5x5 league uses five batting stats (with the addition of runs) and five pitching stats (adding in strikeouts). A 6x6 league normally also includes OPS and Holds, but leagues can vary on this.

The main British Fantasy Baseball competition, FBUK, has a much more user-friendly format, allowing all fans to join in regardless of their baseball experience. This competition currently uses the following categories: home runs, hits, extra bases (doubles, triples), runs, RBIs, stolen bases, walks, wins, strikeouts, saves and innings pitched. The game works by awarding a specified number of points for each occasion a member of your team hits a home run, gets a hit, steals a base etc.

History

Baseball statistics are more than mere numbers. They are part of the fabric of baseball history, capable of conjuring up vivid memories and emotions.

- 714? Babe Ruth's career home run total.
- 56? Joe DiMaggio's consecutive game hitting streak record.
- 262? Ichiro Suzuki's record number of hits in a single season.

Such numbers are a part of baseball folklore.

The sport has few equals when it comes to celebrating and honouring its past, so when an active player nears one of the all-time records or draws close to a landmark number (such as 500 home runs), the importance of statistics to both fans and players alike is keenly felt.

Keeping score

It should have become clear that the official scorer plays a very important role, not only in recording everything that happens, but also in making ruling decisions. They are responsible for producing the official account of the game from which the statistics are compiled.

The process of keeping score is a great skill to learn. For many baseball fans, keeping their own record of the game as it unfolds really adds to the experience and enjoyment of a ballgame. An introduction to this discipline will be the subject of a future *BBfB*.

Further Reading

'Section 10: The Rules of Scoring' in MLB's Official rules:
http://mlb.mlb.com/mlb/downloads/y2008/official_rules/10_the_official_scorer.pdf

Baseball Field Guide: An in-depth illustrated guide to the complete rules of baseball by Dan Formosa and Paul Hamburger, (Thunder's Mouth Press, 2006),

The stats section on MLB.com provides useful guidance about stats as well as a staggering array of statistics to consult.
http://mlb.mlb.com/mlb/stats/index.jsp

Baseball-Reference.com is the ultimate source for current and historical baseball statistics:
http://www.baseball-reference.com/

Baseball Prospectus.com provides some free content alongside exclusive articles and BP proprietary stats for a very reasonable subscription fee:
http://www.baseballprospectus.com/

APPENDIX A - An example box score

Wednesday 26 March 2008 – Boston Red Sox 1 – 5 Oakland Athletics

Boston	AB	R	H	RBI	BB	SO	AVG
Pedroia (2B)	4	0	0	0	0	1	.250
Youkilis (1B)	3	0	0	0	1	0	.143
Ortiz (DH)	3	0	0	0	1	1	.000
Ramirez (LF)	4	1	1	1	0	3	.333
Lowell (3B)	4	0	2	0	0	0	.375
Moss (RF)	3	0	0	0	0	3	.250
--Casey (PH)	1	0	0	0	0	0	.000
Varitek (C)	4	0	0	0	0	3	.000
Crisp (CF)	3	0	1	0	0	2	.333
Lugo (SS)	2	0	1	0	1	0	.500
TOTALS	**31**	**1**	**5**	**1**	**3**	**13**	

Oakland	AB	R	H	RBI	BB	SO	AVG
Buck (RF)	5	0	0	0	0	1	.000
Ellis (2B)	3	1	0	0	1	1	.143
Barton (1B)	3	0	0	0	1	1	.000
Sweeney,M (DH)	4	1	2	0	0	0	.500
Brown, E (LF)	4	1	1	3	0	0	.250
Crosby (SS)	4	1	1	0	0	1	.333
Hannahan (3B)	4	0	1	0	0	2	.375
Suzuki (C)	3	1	2	0	1	0	.375
Denorfia (CF)	2	0	1	1	0	1	.500
--Cust (PH)	0	0	0	0	1	0	.000
--Fiorentino (PR-CF)	1	0	1	1	0	0	.1.000
TOTALS	**33**	**5**	**9**	**5**	**4**	**7**	

Casey - Grounded into a DP in the 9th.

Batting
2B: Crisp .
HR: Ramirez .
TB: Ramirez 4; Lowell 2; Crisp 2; Lugo.
RBI: Ramirez (5).
GIDP: Pedroia; Casey.

Base running
SB: Lugo 1.

Cust walked for Denorfia in the 6th.
Fiorentino ran for Cust.

Batting
2B: Crosby (1, Lester), Suzuki 2 (2, Aardsma, Corey).
HR: Brown, E (1, 3rd inning off Lester, 2 on, 1 out).
TB: Sweeney, M 2; Brown, E 4; Crosby 2; Hannahan;
Suzuki 4; Denorfia; Fiorentino.
RBI: Denorfia (1), Brown, E 3 (4), Fiorentino (1).

Fielding
E: Crosby , DP: 2

Boston	IP	H	R	ER	SO	BB	HR	ERA
Lester (L) (0-1)	4.0	5	4	4	4	3	1	9.00
Aardsma	1.2	1	0	0	3	0	0	0.00
Lopez	0.1	0	0	0	0	1	0	0.00
Delcarmen	1.0	1	0	0	0	0	0	0.00
Corey	1.0	2	1	1	0	0	0	4.50

Oakland	IP	H	R	ER	SO	BB	HR	ERA
Harden (W) (1-0)	6.0	3	1	1	9	3	1	1.50
Casilla (H, 1)	1.0	1	0	0	2	0	0	0.00
Foulke (H,2)	1.0	0	0	0	1	0	0	0.00
Embree	1.0	1	0	0	1	0	0	0.00

This was the second game of the 2008 regular season; therefore the AVGs and ERAs only relate to one or two games.   Note that the AVG is their overall season average at the end of the game, not the average for that single game.   The same is true for ERA.   Where a batter's name is preceded by --, this indicates (in this example at least) that they took the place of the player listed above.

*In the pitching line, the R shows how many runs were scored against each pitcher and then the ER states how many of these were earned runs. So the 4-4 in Lester's line does not mean that he gave up 4 runs **and** 4 earned runs, just that all four of the runs he gave up were 'earned' runs.*