

2016

# CRACKING FanDuel



FOOTBALLGUYS

# Cracking FanDuel

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## ***Foreword***

*By Joe Bryant and David Dodds*

Welcome, Footballguy!

If you're reading a book foreword, you're our kind of guy—the kind who wants to know everything. You're going to **love** this book. Daily Fantasy Sports (DFS) is the biggest thing to hit fantasy football since, well, fantasy football.

DFS has exploded in popularity and has everyone in our vibrant community talking. It's clearly no longer the new game in town; it's the preferred way to play fantasy football for a growing number of people.

And Footballguys is here to give you the edge you need to dominate. In many ways, DFS is complementary to season-long fantasy football, as detailed and accurate statistical projections are the foundation for both. That's great news, as Footballguys has a proven track record of accurate projections, but there's much more to consistently winning DFS than just good projections.

Just like with the season-long game, it's not only about the projections; it's about what you do with them. And as the game becomes more popular, the competition becomes more intense. Now, more than ever, you need an edge to win.

With this book, we're giving you that edge. We're going to tell you in detail what we've done to consistently win in Daily Fantasy Football.

But first, let us tell you how we got here. Since 2000, Footballguys has been instrumental in helping our subscribers win their leagues. From local leagues with modest entry fees to the highest of high-stakes leagues with hundreds of thousands of dollars on the line, Footballguys has been the go-to secret weapon for winners.

When DFS came onto the scene a few years ago, we quickly realized it was here to stay. Two years ago, one of us, David Dodds, deposited \$50,000 of his own money into FanDuel and set out to learn the ins and outs of DFS, knowing he'd accelerate the learning curve with skin in the game.

David documented his thoughts and processes along the way on his blog: <http://50percentds.blogspot.com>. To say David has been successful is an understatement. In his first two years, he earned more than \$63,000 in profit from FanDuel's daily fantasy football contests.

Now we're ready to share what we've learned with you—and not just David's lessons.

The strength of Footballguys has always been our team. Our staff boasts some of the best DFS minds in the game, including five more staffers added this year dedicated to the Daily games. This book is a collaborative effort from the Footballguys team, putting our heads together with one goal in mind: delivering you the keys to help you consistently dominate DFS football.

Most sections were written by two-man teams of staffers with input from another 20 staffers along the way. Two heads are better than one. In our case, 22 heads are better than two as we've cracked the code for winning and we're sharing it with our subscribers.

Why share? It's a fair question. Will we win less playing DFS ourselves by sharing our secrets? Probably. By the same token, however, we'll be smiling ear to ear when we hear one of our subscribers just cashed for \$100,000 in a big guaranteed prize pool.

Our business at Footballguys is helping our customers win. Period.

So rest assured that nothing is held back as we're laying everything we have on the table to help you win.

That's the Footballguys way.

And it'll get even better with your help. Just as we collaboratively created the content here, I have no doubt we'll refine it further. You can help by submitting feedback and criticism at <http://footballguys.com/fdbook.php>. We welcome disagreement and discussion.

Footballguys has always been about our community, and many of our best features over the years have evolved from discussion and feedback from our subscribers. This book will be no different, so let us know what you think.

With all due respect to the other books out there, we think this is the best book ever written on DFS. With your help, it can be even better. Let's hear it.

And with that, let's jump in. Good luck and may all the bounces go your way!

Joe Bryant & David Dodds  
Owners, Footballguys.com

## ***1. Introduction***



## 1.1. Fantasy Football

By Joe Bryant

“What a long strange trip it’s been...”—The Grateful Dead

The year was 1988. Ken Griffey Jr. was called “The Kid” not because it was a catchy nickname. But because he was 19 years old. The top NFL quarterbacks looked like a CBS set with Boomer Esiason, Dan Marino, and Phil Simms atop the leaderboards. Yes, those guys played. And pretty well. Rob Gronkowski, Andrew Luck, and Russell Wilson hadn’t been born yet. Neither had the World Wide Web. On the familiar side, Chris Berman was already at ESPN. And his hair was glorious.



Fantasy Sports was clawing its way out of the primordial soup with an estimated 500,000 people participating in 1988.

The exact origins of fantasy sports are a bit murky. For me (and a great many others) the work of Daniel Okrent and his Rotisserie League Baseball book was the gateway down the rabbit hole. They made popular the concept of drafting players and managing a team. Finally we had an answer to “Could you run a team better than Marge Schott?”



And let me tell you something else. Fantasy sports weren't quite as cool back then. Neither was being an entrepreneur. And that was me on both counts. In 1988, fantasy sports had almost as much in common with Dungeons & Dragons as they did SportsCenter. And the guys becoming entrepreneurs were the guys who couldn't land jobs at IBM. Today, fantasy sports have been featured on the cover of *The Wall Street Journal*; and TV shows like *Shark Tank* top the ratings by glorifying small businesses. I like to say it just took a while for society to catch up.

Today there are more than 57 million people playing fantasy sports in North America, according to the Fantasy Sports Trade Association. And that number is growing.

Why? Because of people like you. And me. And pretty much most everyone you know. Playing fantasy sports is fun because it scratches the itch most of us have—calling the shots. We've all felt the sting as our favorite team lets its best player get away. Or pays way too much for the washed up has-been. Or passes on the hidden-gem rookie to draft the combine star who we know will be out of the league in three years. With fantasy sports, for better or for worse, we are the Decider.



We make the calls, get the glory when we're right, and blame unforeseen forces when we're wrong. Pretty much like real NFL Owners and GMs.

As the hobby grew, fantasy football owners would gather in the summer and draft their teams. Once the season was underway, they'd scour the waiver wire trying to separate the one-week wonders from the developing trends. All the while trading players with as much deception, cunning, and deceit as their morals could stand. And it was good.

Variations of the season-long format inevitably developed, most notably through the use of different scoring systems. Basic leagues would award points to players for just actual scoring plays. Then came more performance-based scoring systems where players could earn points for yards gained or receptions or fumbles recovered. Or pretty much anything you liked.

Along with the evolution in scoring systems came changes in roster requirements. Some leagues liked to start two wide receivers. Some preferred three wide receivers. Some leagues loved a flex player who could be WR or TE. Of course, some then pushed the flex even further to include RB/WR/TE. And when fans of defense felt left out, leagues adopted rules to include Individual Defensive Players (IDP).

Not to mention the variations for assigning players. Most leagues preferred a draft system. But many leagues swore by an auction format. And both formats would allow some degree of dynasty-building where players are carried over from year to year.

The beauty of fantasy sports soon became evident in that your league could create whatever system you wanted. This was *your* league and that meant *you* built it the way *you* wanted. And that was good too.

Even with all the variations in scoring and format, the common factor remained that the fantasy season mirrored the NFL season for the most part. The fantasy season started with Week 1 of the NFL season and finished usually in Week 16 or 17 of the real season.

Then came the rub that often rears its head: sometimes bad things happen. If you spent a ton on Tom Brady in 2008, Jamaal Charles in 2011 or Adrian Peterson in 2014, your season was in serious trouble nearly before it started. And that was not so good.

Fantasy owners began to ask if there weren't a better way to play.

FanDuel offered a compelling answer.

With the advent of the daily format, fantasy owners were no longer saddled for an entire season with a poor draft choice. And owners were never sniped by a rival stealing a coveted player before their draft turn. FanDuel set salaries each week for every player and it was up to each owner to craft a lineup under the salary cap. And owners could play as much or as little as they wanted.

Was it successful? FanDuel started in the summer of 2009 and had only a few thousand active users up until 2011. By the end of 2011, the paid active users had grown to just over 17,000 and they eclipsed \$1 million in revenue. Today, FanDuel has millions of active users.

I'd say it was successful. And continues to be.

This past December, 120 qualifying finalists caught passes from Joe Montana and Dan Marino at the FanDuel World Fantasy Football Championship in San Diego. Roman "Longbottoms" Edmund took home the \$3 million top prize.

And it doesn't look like the momentum is slowing anytime soon. The daily space continues to grow as more people jump both into fantasy sports as a whole and specifically into the daily-game format. If you've read this far, I'm assuming you're one of those. Welcome and let's get busy.



## **1.2. What is DFS?**

*By Mark Wimer and Justin Bonnema*

Readers new to daily fantasy sports (DFS) are encouraged to skim the glossary beginning on page 133 before continuing. We've tried not to litter this book with unnecessary jargon, but the regular use of certain terms specific to this hobby proved unavoidable.

Daily fantasy sports are a spin-off of traditional fantasy sports, but each competition lasts somewhere between a few hours and a few days rather than a whole season. And instead of using a snake or auction draft to allocate players, DFS owners select any combination of players they want so long as they fit under the salary cap.

Salary cap is the key concept. All owners have full access to the same pool of players, meaning multiple teams may, as an example, select Antonio Brown (the number of times a given player is selected in a contest is referred to as ownership percentage or exposure, which we'll discuss in later chapters). FanDuel NFL contests have a \$60,000 salary cap and require nine starters: one quarterback, two running backs, three wide receivers, one tight end, one kicker, and one defense. Your goal is to build a competitive lineup without exceeding the cap.

As you can imagine, star players cost a lot more than average players. What makes DFS so much fun is finding a balance between the two. FanDuel generates salaries that make it impossible for anyone to build of lineup of only star players. Skillful contestants excel at bargain hunting and finding value.

On a macro level, DFS is not all that different than season-long leagues. While the end goal of season-long is to be champion come season's close, it's still a series of weekly games. Now imagine if every week your league released all players into a pool and redrafted, using the parameters described above. That's the spirit of DFS. All fantasy players have the same opportunity, with winners decided by the total points each lineup generates, and are awarded a predetermined prize.

So how much does it cost to play?

Technically, nothing. There are free play contests almost every week open to all users. But if you want to convert your favorite hobby into a potential stream of income, you'll need to make a deposit and play in real-money contests.



How much to invest is entirely up to the user. Some may play with \$100, others \$10,000 or more. Most sites have a minimum deposit amount, anywhere from \$5 to \$10, but after that it's whatever you can afford and whatever you're comfortable with.

What's more important than how much you deposit is how you manage that deposit to get a return on your investment. We'll cover bankroll management in Section 5.3. For now, all you need to know is daily sports works like a small business where you are the CEO and CFO. You decide how much to invest, where to invest, and when to cash out.

So how do you make money playing DFS?

That is a great question—and it's what this book is primarily about. Honestly, you are probably not going to become a millionaire, and you'll likely have to keep your job no matter how good you are at fantasy football. But the great thing is that DFS provides an opportunity to convert fantasy football from just a hobby into a profitable venture, possibly even into a career.

Profiting in DFS is a complicated business. It's more than just selecting the best players and throwing out a bunch of lineups each week. Several factors play a strategic role, including salary allocation, game selection, and bankroll management. And as the industry grows—as it surely will—the competition will get tougher. Reading the pages that follow will go a long way toward staying ahead of the curve.



### **1.3. Advantages of DFS Over Traditional Leagues**

By Austin Lee

We love playing season-long fantasy football, especially when it's with a group of people who are competitive, fun, and enjoy the same league setup as we do. Even in our ideal league, however, there are several aspects of traditional fantasy leagues that bug us. The terrific thing about Daily Fantasy Sports is that it gets rid of almost all of those annoyances without sacrificing the aspects of the game we love. DFS offers immediacy, simplicity, and flexibility that year-long leagues can't compete with.

The immediate gratification of daily fantasy is easy to identify. You can go from buy-in to winner in a single three-hour game slate on Sundays. The longest game slates usually max out at 100 hours from the start of Thursday Night Football to the completion of Monday Night Football. You're beholden to each team you create for less than five days, and then you toss it aside without thinking twice about it. Injuries and underperforming players are wiped clean from your slate instead of being a year-long drain. DFS is a big win when it comes to short commitments and quick payouts.



Daily fantasy also simplifies the annoying logistics, which you'll especially appreciate if you've ever been the commissioner of a season-long league. You don't have to create a league constitution, pester people for money, or chase down deadbeat managers who start bye-week players. Fighting about collusion, vetoes, and fairness all disappear because the DFS host site handles all of the commissioner duties for you. Their rules are fair, clearly explained, and have been perfected over many years. DFS clears the way so that the only drama you face is on the football field.

The biggest area where daily fantasy shines is in its flexibility. You have to always be on your toes to win your season-long league, beating your competition to the latest news, the best trades, and the hottest pickups. You and your competition constantly fight to beat each other to the punch.

Conversely, with DFS you can play on your schedule. If you like, you can completely ignore football from Tuesday to Saturday and do all of your preparation on Sunday mornings. There's no rush because everyone can own the same player. You're no longer a slave to the waivers schedule or timed trade responses.



Have a remote weekend getaway planned? Skip a week. When you're ready to join a contest, you don't have to coordinate with anyone. It's easy to find a game, and you don't need an even number of teams. You can play against one opponent or 100,000 opponents. It's your choice.

With daily fantasy you never feel "out of it" with a year-long team that has a terrible first half of the season. You don't argue about the lopsided ratio of *points for* to *points against* and its impact on your league standings. You don't get burned by a bad playoff matchup on your epic championship run.

DFS is the faster, simpler, more flexible version of the fantasy football game that you've loved for years. It doesn't have to replace your season-long leagues, but it offers welcome variety.



## **1.4. FanDuel History and Position in the Industry**

By Kyle Wachtel and Austin Lee

In January of 2008, the team behind FanDuel originally created Hubdub.com, which essentially turned news into a game by allowing users to predict future events. At the 2009 South by Southwest Festival in Austin, Texas, the founders chose a new direction: daily fantasy sports. Backed by Series A funding of \$1.2 million from Pentech Ventures and Scottish Enterprise, FanDuel was born, launching in June of 2009.



*FanDuel founder and CEO Nigel Eccles*

While FanDuel was not the first daily fantasy site, it has been the true pioneer, leading the charge in one of the fastest growing areas of fantasy sports. Nigel Eccles, FanDuel's CEO, has been referred to as the "Godfather of Daily Fantasy Sports."

FanDuel is an official partner of the National Basketball Association and has exclusive alliances with 16 NBA teams and 15 National Football League franchises.



With its rapid growth, the prize pools for FanDuel's premier tournaments have skyrocketed. The live final for the inaugural FanDuel Fantasy Football Championship (FFFC) in 2010 offered \$50,000 in prizes, while the 2015 FanDuel World Fantasy Football Championship (WFFC) awarded a whopping \$12 million in prizes, including \$3 million to first place alone.

## ***2. Types of Contests***



## 2.1. The Basics

By Ryan Hester and Austin Lee

Before covering the different types of contests or diving deeply into strategy, let's get you grounded in the basics. Each FanDuel football lineup that you build has specific roster requirements and a salary cap. A valid lineup has one quarterback, two running backs, three wide receivers, one tight end, one kicker, and one team defense.

The screenshot shows the FanDuel NFL Sunday Million contest interface. At the top, it displays the tournament details: 5194 / 92485 entries, \$25 entry fee, and a guaranteed prize pool of \$2,000,000. It also indicates that it's a multi-entry contest (150 max) and features a guaranteed prize pool.

The contest schedule for the day is listed below:

ALL	CHI @ HOU 9/11 1:00PM	TB @ ATL 9/11 1:00PM	GB @ JAC 9/11 1:00PM	BUF @ BAL 9/11 1:00PM	CIN @ NYJ 9/11 1:00PM	MIN @ TEN 9/11 1:00PM	SD @ KC 9/11 1:00PM	CLE @ PHI 9/11 1:00PM	OAK @ NO 9/11 1:00PM	MIA @ SEA 9/11 4:05PM	NYG @ DAL 9/11 4:25PM	DET @ IND 9/11 4:25PM	NE @ ARI 9/11 8:30PM	PIT @ WAS 9/12 7:10PM	LA @ SF 9/12 10:20PM
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The "Available Players" section lists the top fantasy players for the day, including their position, name, FPPG, played games, game, and salary. The "Your Lineup" section shows the current lineup selection, which is empty at this point, with a total salary of \$60,000 remaining.

Name	FPPG	Played	Game	Salary
WR Antonio Brown	20	16	PIT@WAS	\$9,300
WR Odell Beckham Jr.	18.1	15	NYG@DAL	\$9,100
QB Aaron Rodgers	19.3	16	GB@JAC	\$9,000
WR Julio Jones	19.2	16	TB@ATL	\$9,000
RB Todd Gurley	15.2	13	LA@SF	\$8,900
RB Le'Veon Bell	16.5	6	PIT@WAS	\$8,800
RB David Johnson	12.4	16	NE@ARI	\$8,800
QB Andrew Luck	20.4	7	DET@IND	\$8,700

Lineup locks are set to lock at 9/11 1:00pm.

The top players can have salaries over \$10,000, while players expected to score few fantasy points can be rostered for the \$4,500 minimum. You must fill every position in your lineup without going over the \$60,000 salary cap. Your lineup can always total less than \$60,000, but if you go over the limit or fail to fill all of the roster spots, your lineup will not be accepted.

### 2.1.1. Scoring

The lineup that you create accumulates fantasy points according to the scoring system outlined below. Your lineup's point total is compared to the scores of your opponents' lineups in the same contest. The more points your team scores, the better your chances of winning. FanDuel's scoring system is pretty standard, but it's important to keep the half point per reception in mind when evaluating players.

Offense	Points	Defense	Points
rushing/receiving yard	0.1	sack	1
rushing/receiving touchdown	6	recovering opponent's fumble	2
reception	0.5	safety	2
passing yard	0.04	blocked kick	2
passing touchdown	4	extra point return	2
interception	-1	interception	2
fumble lost	-2	fumble/interception return touchdown	6
rushing/receiving/passing 2-pt conversion	2	kickoff/punt return touchdown	6
kickoff/punt-return touchdown	6	0 points allowed	10
own fumble recovered for touchdown	6	1-6 points allowed	7
field goal made from 0-39 yards	3	7-13 points allowed	4
field goal made from 40-49 yards	4	14-20 points allowed	1
field goal made from 50+ yards	5	28-34 points allowed	-1
extra-point conversion	1	35+ points allowed	-4

Playing at FanDuel means making a lot of choices. You can choose how often you play, how many opponents you compete with, and how much time and money you invest. Entry fees range from \$0.25 to \$10,600, and you can even win real money playing in free play contests. FanDuel also allows you to create your own public or private contests.

The majority of daily fantasy contests fall into two categories: cash games and tournaments. Cash games offer a conservative investment. Tournaments are harder to win but have huge prizes. Both are fun to play, but they require different approaches. The next two sections will help you understand cash games and tournaments, and the variety of contests available within each category.

The screenshot shows the FanDuel website interface for searching contests. At the top, there are tabs for 'Featured' (selected), 'NFL', 'MLB', 'NBA, NHL NO OPEN GAMES', and a 'Create Contest' button. Below these are four categories: 'Tournaments' (High-paying contests with guaranteed prize pools), '3-100 Player' (Compete against fewer players; multiple payout structures), 'Head to Heads' (Compete against a single opponent, winner take all), and '50/50s & Multipliers' (Have a 50/50 shot to win - or play for up to 5 times your money). On the left, there are filters for 'Entry fee' (\$0 MIN to \$50,000 MAX) and 'Entry type' (All, Single Entry, Satellites & Qualifiers). The main area displays a search bar and a table of contests. The table columns include CONTEST (with icons for NFL, NBA, NHL, etc.), GUARANTEED/MULTI-ENTRY status, ENTRIES / SIZE, ENTRY fees, PRIZES, STARTS (ET), ENTERED status, and LINEUP AVAILABLE. Each row has a green 'ENTER' button. The contests listed are:

Contest Type	Description	Entries / Size	Entry Fee	Prizes	Starts (ET)	Status	Action
NFL	\$2M NFL Sunday Million (\$200K to 1st)	5194 / 92485	\$25	\$2,000,000	9/11 4:00pm	ENTER	
NFL	\$1 Million Sun NFL Rush (\$100K to 1st)	4843 / 231213	\$5	\$1,000,000	9/11 1:00pm	ENTER	
NFL	\$500K Sun NFL Monster (\$100K to 1st)	28 / 1862	\$300	\$500,000	9/11 1:00pm	ENTER	
NFL	\$300K Sun NFL Kickoff (\$50K to 1st)	270 / 28901	\$12	\$300,000	9/11 1:00pm	ENTER	
NFL	\$250K Sun NFL Dive (\$250K Guaranteed)	6076 / 29417	\$1	\$250,000	9/11 1:00pm	ENTER	
NFL	\$200K Sun NFL Snap (\$10K to 1st, 25% Win)	17737 / 115606	\$2	\$200,000	9/11 1:00pm	ENTER	

## **2.2. Cash Games**

*By Chad Parsons and Maurile Tremblay*

Several types of daily fantasy contests can be broadly classified as cash games. These contests are safer investments and offer lower bankroll volatility than tournaments. All cash games meet the following three criteria:



1. Each prize is less than or equal to double the entry fee.
2. The prize pool is level. All winners earn the same prize regardless of whether they have the highest-scoring team or the lowest-scoring team in the payout zone.
3. More than 40% of the entrants win a prize.

FanDuel hosts four kinds of cash games: 50/50s, Double Ups, head-to-heads, and matrix contests.

### **2.2.1. 50/50s**

50/50 contests are one of the most straightforward offerings in DFS. Regardless of the size of the contest, the teams that score in the top 50% of the field will cash. Winners double their money, minus FanDuel's commission. FanDuel's commission varies from contest to contest, but



if 10%, you would get \$1.80 for winning a 50/50 with a \$1 entry fee. Because 50/50 winners typically see a net profit of 80% of their buy-in, they'll have to win at least 55.6% of the time to grow their bankroll.

50/50 contests offer a variety of competition. No professional high-volume player can scoop all of your action, so it's easier to avoid one-on-one action against the sharks. Play it safe by rostering consistent, low-risk players.

FanDuel offers hundreds of 50/50 contests each week of the NFL season. From \$1 all the way up to high-stakes entry fees, 50/50s can quickly become the staple of a medium- to high-volume DFS cash-game player.

### **2.2.2. Double Ups**

Double Ups are close relatives of 50/50s. While 50/50s offer prizes of less than double a player's entry fee, Double Ups offer winners 100% returns. The tradeoff is less than half of the field wins. For example, if FanDuel's commission is 10%, 45 winners will double their money in a 100-player contest.

Because FanDuel typically creates Double Up contests with a higher maximum number of competitors than 50/50s, and because the prize pools in Double Ups are guaranteed, Double Ups are listed in their Tournaments section even though Double Ups don't have a tournament-style prize structure.

When choosing between similar cash games, play the larger field. While there are bound to be a few more sharks in the water, their presence is more than offset by plenty of new players and weak lineups padding the bottom of the leaderboard.

### **2.2.3. Head-to-Heads**

Head-to-head cash games are basically two-person 50/50 contests. They pit one person against another, and the higher score wins. This simplicity has pros and cons.

A head-to-head player can window-shop the available listings. You can click on player profiles to scout for less-experienced opponents and spread out entries over the course of the week. Alternatively, creating your own head-to-head contests opens you up to a shark scooping up one—or all—of your listings, putting you at a disadvantage out of the gate.

If you are going to enter the same lineup in multiple contests, entering head-to-head contests will reduce your variance (i.e., risk) compared to entering large 50/50s or Double Ups. This is because the score required to win one large 50/50 will generally be very close to the score required to win any other large 50/50. So if you enter the same lineup in multiple large 50/50s, you are likely to either win pretty much all of them or lose pretty much all of them, depending on how many points your team scores. The same is true for Double Ups. But the score required to win different head-to-head matchups may vary greatly because your different opponents will score different numbers of points. So even if your team scores the same number of points in each contest, it is likely that you will win somewhere around, say, 40% or (more hopefully) 60% of your contests, instead of all or nothing.



Assessing the week's pricing can influence the types of contests a DFS player will enter. If you're excited about the values of a small list of players, you might consider having less variety in your lineups and entering more head-to-head contests. On the other hand, if you see a lot of values and want to generate a wide variety of lineups, you'll probably enter more 50/50s and Double Ups.

#### **2.2.4. Head-to-Head Matrix Contests**

The head-to-head matrix contests use a format which essentially packages a group of head-to-head contests into one entry. As an example, let's consider a 21-player head-to-head matrix contest with a \$25 entry fee. In this contest, you would be facing 20 unique opponents where the prize structure mimics the payouts you'd receive if you played each of those 20 players in a \$1.25 head-to-head contest.

This payout structure softens the blow of a bad showing, but the tradeoff is if you finish in the top half (but not in first place), you will win less than you would have won in a 50/50. Matrices are the conservative, mutual fund investments of the DFS world. They're the one-stop shop for head-to-head diversity, which can save time better spent building lineups, researching matchups, and mining the best value plays of the week. Matrix contests can be found using FanDuel's Leagues filter.



## 2.3. Tournaments

By John Lee and Jeff Pasquino

If you're practicing sound bankroll management, cash games will represent 80-90% of your weekly action, but it's the other 10-20% of your play in tournaments that can change your life in an instant. Tournaments live on the opposite end of the risk-reward spectrum from cash games and meet the following three criteria:

1. The prize pool is guaranteed. Even if the contest doesn't completely fill, the guaranteed prize pool (GPP) will still pay out the top finishers as if the contest were filled completely. For this reason, people often refer to tournaments as GPPs even though some cash games also have guaranteed prize pools.
2. The prize pool is *not* level. It's tiered, with first place receiving the largest prize and then the prizes descend downward.
3. Fewer than 30% of the entrants win a prize.

The smallest tournaments usually have no fewer than 45 entrants and are reserved for the heftiest buy-ins. The largest contests exceed 100,000 entries, and the buy-ins for these massive tournaments generally range from \$1 to \$25. The prize structure will vary from contest to contest, so read the details carefully before entering.



Playing in tournaments can be a bit daunting at first with thousands of entries and a top-heavy prize structure. Sometimes you'll have a strong week and still not cash. That's why it's wise to spend a small percentage of your bankroll on tournaments, but don't avoid them entirely.

Prize pools have grown rapidly over the years, and the largest

tournaments now award several million dollars in prizes. Since 2010, FanDuel has been offering a trip to compete in their annual FanDuel World Fantasy Football Championship (WFFC) live final, which is the granddaddy of all football contests. Last year's winner took home a whopping \$3 million after playing catch with Joe Montana and Dan Marino.

In later sections, we'll outline plenty of strategies for increasing your odds of a top-tier tournament finish, but let's first take a tour of some of FanDuel's tourneys:

Entry	Players	Total	Prizes	Top Prize	Winners	Rake
\$1	1149	\$1,149	\$1,000	\$100	18.0%	13.0%
\$1	5747	\$5,747	\$5,000	\$400	18.1%	13.0%
\$1	34,479	\$34,479	\$30,000	\$2,500	17.9%	13.0%
\$2	574	\$1,148	\$1,000	\$125	18.1%	12.9%
\$2	11,494	\$22,988	\$20,000	\$2,000	16.5%	13.0%
\$2	57,471	\$114,942	\$100,000	\$8,000	18.7%	13.0%
\$5	229	\$1,145	\$1,000	\$150	18.3%	12.7%
\$5	919	\$4,595	\$4,000	\$500	17.2%	12.9%
\$5	4,597	\$22,985	\$20,000	\$1,750	15.5%	13.0%
\$10	114	\$1,140	\$1,000	\$200	18.4%	12.3%
\$10	1,379	\$13,790	\$12,000	\$2,000	14.1%	13.0%
\$10	2,298	\$22,980	\$20,000	\$2,000	18.6%	13.0%
\$25	45	\$1,125	\$1,000	\$300	17.8%	11.1%
\$25	6,896	\$172,400	\$150,000	\$20,000	18.2%	13.0%
\$50	45	\$2,250	\$2,000	\$600	17.8%	11.1%
\$50	224	\$11,200	\$10,000	\$1,000	19.6%	10.7%
\$100	61	\$6,100	\$5,500	\$1,200	16.4%	9.8%
\$200	555	\$111,000	\$100,000	\$15,000	18.2%	9.9%
\$535	20	\$10,700	\$10,000	\$4,500	20.0%	6.5%
\$1,065	50	\$53,250	\$50,000	\$15,000	18.0%	6.1%
<b>Total/Avg:</b>	<b>6417</b>	<b>\$615,113</b>	<b>\$543,500</b>	<b>14.2%</b>	<b>17.8%</b>	<b>11.6%</b>

This isn't an exhaustive table, but it shows FanDuel's variety of tournament sizes and buy-in amounts while highlighting some prize structure similarities. All winners in these contests will at least double their money, which isn't always the case with tournaments on other host sites.



Roughly 18% of entrants will win, and first place will walk away with about 14% of the total prize pool. FanDuel's commission starts at 13%, drops dramatically for high-rollers, and is less than 12% over this entire sample.

In order to achieve these massive prize pools, DFS sites often allow multi-entering, which lets a single person enter multiple rosters into the same contest in order to increase their odds of winning the grand prize. This practice is often frowned upon by novices because it would appear to be an unfair advantage for those playing with large bankrolls, but don't let multi-entry intimidate you.

Multi-entering is based on building additional lineups that are suboptimal. If you enter more than one lineup into a contest, every entry after the first one will include players who you originally thought would be less likely to win the tournament. In a later section, we'll talk about the sweet spot for the number of rosters that will increase your odds of winning a large GPP, but for now just know that there is a threshold for diminishing returns.



If the notion of competing against multiple entries from a single person dissuades you from entering such contests, you can enter single-entry contests instead. Just know that the prize pools for single-entry tournaments won't be nearly as big as the epic, multi-entry contests.

## **2.4. Hybrids**

*By John Lee and Jeff Pasquino*

Most of DFS focuses on cash games and tournaments, but there are a few other types of contests that are hybrids of those two classifications. Multipliers, leagues, and satellites have unique setups that combine elements from the cash game and tournament worlds. Depending on how top-heavy the payout structure is, you'll have to blend cash game and tournament strategy to increase your odds of winning.

### **2.4.1. Multipliers**

We already discussed one type of multiplier contest, the Double Up cash game. The other two types of multipliers that FanDuel hosts, triple-ups and quintuple-ups, are hybrids because they have a level prize structure like a cash game, but less than a third of the players get paid, similar to a tournament. Multipliers are usually—if not always—guaranteed, and you can find them all in FanDuel's Tournaments section.

In a triple-up—also known as a 3x contest—the top 30% of the field will triple their money, making 200% profit. In a quintuple-up, roughly the top 18% of the competitors will win five times their entry fee, yielding a 400% profit.



### **2.4.2. Leagues**

FanDuel runs leagues with 3, 5, 10, 20, and 100 players. Leagues don't meet the tournament definition we outlined previously because their prize pools aren't guaranteed. If they don't fill, they're cancelled, and everyone has their entry fee fully refunded.

Leagues don't have a level payout structure, but the payouts in larger contests are sometimes steeply tiered. As you can see in the table below, the prize structure is a bit top-heavy, even compared to some tournaments. Leagues are sort of like non-guaranteed tournaments designed for a much smaller field.

### **FanDuel League Payouts Based on Number of Players:**

Players:	3	5	10	20	100
1 <sup>st</sup>	2.7x	4.5x	4.5x	10x	25x
2 <sup>nd</sup>	—	—	2.7x	5x	15x
3 <sup>rd</sup>	—	—	1.8x	3x	10x
4 <sup>th</sup>		—	—	—	8x
5 <sup>th</sup>		—	—	—	6x
6 <sup>th</sup>			—	—	5x
7 <sup>th</sup>			—	—	4x
8 <sup>th</sup>			—	—	4x
9 <sup>th</sup>			—	—	4x
10 <sup>th</sup>			—	—	3x
11 <sup>th</sup>				—	3x
12 <sup>th</sup>				—	3x
13 <sup>th</sup>				—	—

The multipliers refer to how much each place wins compared to their entry fee. For example, the winner of a three-person league with a \$1 entry fee will win \$2.70 for a 170% profit. The other \$0.30 is FanDuel's 10% commission.

You can create custom public or private leagues with anywhere from 3 to 20 players, so a group of friends could play their own league contest with the results calculated by FanDuel. Also be aware that some 100-person leagues allow multi-entry.

#### **2.4.3. Satellites**

A satellite contest—or “satty” as it’s called in the industry—is a special kind of hybrid contest that usually requires a tournament-style approach to winning, but the strategy can vary a great deal from contest to contest.

Satellites originally became popular in the poker world when buy-ins for certain tournaments were prohibitively high. As a solution to allow lower-bankrolled players to enter those high-dollar tournaments, casinos—and later, online sites—offered satellite tournaments where the prize for winning was not a cash prize, but instead an entry into a high-dollar tournament.

Like tournaments, satellites are guaranteed and usually pay a small percentage of the field; but like cash games, the payout is level for those who finish among the winners. The level payout comes in the form tickets for a higher-priced tournament.

FanDuel offers numerous satellites every week of the NFL season, and they offer significant upside at minimal risk. For example, if a person wins a 10-person satellite for \$11, he could turn the subsequent entry into a \$100 tournament into tens of thousands of dollars without risking more than the original \$11.

There are a variety of satellites, so it's important to understand each contest's prize structure. The table below compares two sets of FanDuel satellites. You can win a \$25 ticket by entering a satellite in the \$2 to \$10 range, or you could aim for a \$200 ticket by winning a \$2 to \$50 contest.

### Sample of FanDuel Satellite Contests

Entry	Players	Total	# of Tickets	Ticket Value	Winners	Rake
\$2	359	\$718	25	\$25	7.0%	13.0%
\$3	239	\$717	25	\$25	10.5%	12.8%
\$5	143	\$715	25	\$25	17.5%	12.6%
\$10	71	\$710	25	\$25	35.2%	12.0%
\$2	229	\$458	2	\$200	0.9%	12.7%
\$10	114	\$1,140	5	\$200	4.4%	12.3%
\$25	45	\$1,125	5	\$200	11.1%	11.1%
\$50	22	\$1,100	5	\$200	22.7%	9.1%
<b>Avg:</b>					<b>13.7%</b>	<b>11.9%</b>

These contests have an incredibly broad range of winning percentages. You could try to finish inside the top 1% of a 229-person contest to turn your \$2 into a \$200 ticket, or you could beat just 65% of the field in a \$10 contest to win a \$25 ticket. These extremes call for very different strategies, and this table represents just a small sample of how satellites are set up. Be sure that you understand the payout structure before crafting your lineup.

Satellites almost always allow multiple entries, and the sharks use this option liberally. In most tournaments, people will enter a variety of lineups into the same contest, but when entering satellites, it can be more beneficial to use a multi-entry strategy known as "running a train." This means putting together a *single* roster that you like and entering it multiple times into the same satellite contest.

The theory behind this practice is that you can secure a large quantity of entries into a big tournament at a reduced price if that single roster does well in the satellite. For example, if you enter a 10-team train into a satellite that pays to the 200th position, and your entry finishes 150th, then your ten teams would finish 151st, 152nd, and so on to the 159th position, thereby securing ten seats in the subsequent tournament.

Running a train is somewhat risky because it represents an all-or-nothing approach to securing entries into a more expensive tournament, but along with that risk comes immense upside. From a bankroll management perspective, satellites should be grouped with tournaments, and you should limit your exposure to satellites to less than 20% of your bankroll.

While running a train is an effective strategy for accumulating entries via satellites, it's a *terrible* practice for top-heavy, non-level payout structures. Why? The likelihood of finishing in the top ten of a giant tournament is extremely low—less than 0.05% in most cases—and submitting multiple entries with the same roster gives you the same odds of winning as entering a single roster with those same players. If the winner takes home more than 20% of the prize pool, there simply isn't enough left for the other high-level finishers to substantiate running trains into that type of contest.

*Keep in mind that you're paying a commission in both the satellite and in the tournament that it feeds into, so the effective total commission will generally be over 20%. If satellites are a good value, it's because your average opponent in a satellite is weaker than your average opponent elsewhere; it has nothing to do with rake-avoidance.*

*I think people often think of satellites the wrong way. They think, "I want to play in this big GPP, but I can't responsibly pay my way into it given my current bankroll, so I'll try to win a satellite into it instead. That way I'm not risking very much." That's bad bankroll management. If you can't afford to buy your way into the big GPP before winning a satellite, then you shouldn't be playing in the big GPP after winning a satellite, either. I mean, yeah, you've now got a ticket to it—but the value of that ticket would be better spent in smaller contests, not the big GPP that, by hypothesis, is above your bankroll. If a \$10 GPP is too rich for your current bankroll, instead of spending \$2 on a satellite into a \$10 GPP, you should spend that \$2 on a quintuple-up for cash. Then if you win, spend the \$10 on games that are properly within your bankroll.*

*The right way to think about a satellite, in my opinion, is: "I want to play in this big GPP. It's within my bankroll to just buy my way into it. But I think I can beat the rake in a satellite, so it's actually less costly for me, on average, to play my way in via a satellite. If I spent \$10 to enter the GPP, I'd have exactly one entry. But if I spend \$10 on five \$2 satellites, I'll end up with something like 1.1 entries, on average."—Maurile Tremblay*

## **2.5. Game Selection**

### **2.5.1. Choosing games**

By John Mamula

Game selection—playing in profitable games rather than unprofitable ones—is one of the most important concepts when playing daily fantasy sports. Even the best players will go broke if they do not have a plan. Most professional DFS players prefer to compete against inexperienced competition because they are more apt to make lineup mistakes. For FanDuel head-to-head contests, we recommend not creating any contests in the lobby until you have at least 1,000 games played.

If you are a new player and you create contests, your games will likely get scooped up by much tougher competition looking to gain a competitive advantage.

You may want to wait until late in the week (Saturday night and Sunday morning) to select many of your head-to-head opponents. By waiting until a few hours before lineup lock, you will often find opponents who have just registered new accounts over the weekend.

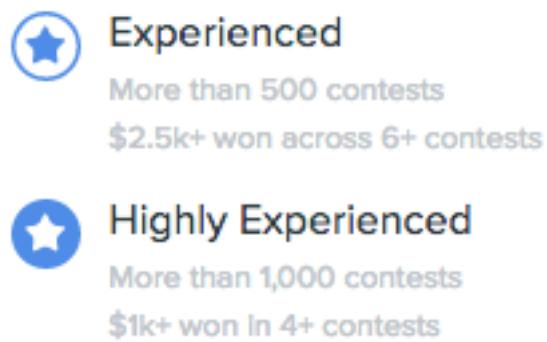
For FanDuel's cash-game contests, we recommend focusing on the largest 50/50s and Double Ups available. The overall skill level increases at the \$25 buy-in amount and above. If you have \$50 allocated for cash games in a given week, you should not look to enter just one \$50 contest or two \$25 contests. It would be better to enter multiple large-field Double Ups and 50/50s with entry fees \$5 and below.

*I have had my greatest success at FanDuel in Double Ups (contests that have 300+ entries) and 100-man 50/50s. FanDuel takes a larger commission (12%) in the Double Ups, but I feel at 300+ entries the edge is too good to pass up. The \$1, \$2, and \$5 50/50s can all be played with 100 entries (and only one entry per person). This ensures you won't be stacked against a ton of pros and is your best bet to increase your bankroll consistently. —David Dodds*

## **2.5.2. Choosing opponents**

By Chris Feery and James Brimacombe

Last year, too many new players didn't know how to identify experienced players in FanDuel's head-to-head lobby. You used to click on players' names to see win counts per sport on their profile pages. But to improve discoverability, FanDuel replaced that feature with a new three-level designation system called Highly Experienced Player (HEP) badges. New players have no badge, and DFS veterans are now clearly identified with one of the following two shields next to their name:



These designations appear in all contest types, making it easy to see how many experienced players are in a contest at a quick glance.

Reactions to the changes have been mixed. While changes were needed to benefit the overall ecosystem, these two designations leave room for a lot of interpretation. A vast majority of players on FanDuel fit into one of these two categories and have a shield next to their name, which makes inexperienced users without a badge stick out like a sore thumb.

Additionally, many weak players have badges. The shields lump players of varying skill levels into the same categories, and volume is the largest determining factor on the level attained. After you play 1,001 contests, you're labeled as "highly experienced" regardless of win rate.

In the new environment, perhaps a good rule of thumb for selecting head-to-head opponents is to look at how many games the user posted in the lobby. Directly next to their name, look for a multiplier sign followed by a number (e.g. x18, x4, etc.), which tells you how many games that user has available at that buy-in level. If you are trying to decide between two players with the same experience designation, take on the player with fewer games posted. A user with x20 next to their name would appear to be more confident in their abilities than a user with x5. That confidence may be misplaced, but generally the more skin in the game, the more time the user will spend on research. It is not a perfect gauge of experience, but FanDuel offers little else since removing player profile pages.

Another tool for finding more information about your opponents is searching through the rankings at RotoGrinders.com to see if they have accounts there. If they have a RotoGrinders account, you can click their usernames to see where they rank in the RotoGrinders community and how good they have been throughout the year at each individual DFS sport.

*Notable tough opponents lurk on head-to-head DFS boards every hour of every day. Creating your own contest opens you up to the possibility of one of the circling sharks taking your game. However, playing a broad spectrum of contests (both head-to-head and otherwise) diversifies your opponents. Including even smaller-size (20-50 players) cash games, like 50/50s and Double Ups (or the Head-to-Head Matrix style on FanDuel), is another way to round out the weekly portfolio without being exposed to singular sharks gobbling up a number of head-to-head contests. —Chad Parsons*

*Head-to-head is a sucker's bet for all but the best players in the world. I have a win rate on every line item in my cash spreadsheet, but I finished the year with a negative ROI at \$25 and above in head-to-head contests. At levels \$25 and above, you are competing against the best of the best. Personally I don't think it's worth it. If you don't have a Highly Experienced Player (HEP) badge, the pros are going to eat up your action. Heads-up at \$5 and below, though, does not have a lot of pro players since FanDuel limits the number of low-priced contests players can enter. —David Dodds*

**3. Lineup Construction**



### **3.1. Understanding Expectation and Variance**

By Maurile Tremblay

When we project Keenan Allen to score 9.5 points in FanDuel's scoring system, what does it mean?

It doesn't mean that we expect him to score precisely 9.5 points. That's possible, but it's very unlikely. Even if 9.5 is more likely than any other specific number, that exact outcome occupies an exceedingly small slice of probability space.

What it means in theory is that if you take each fantasy point total Allen could conceivably get, multiplied it by the respective probability of getting that score, and add all of those products up, you'd get a sum of 9.5. (Using the same procedure, we'd project the roll of a six-sided die to produce a value of 3.5, because  $1*1/6 + 2*1/6 + \dots + 6*1/6 = 3.5$ . Even though the die lacks a side with 3.5 on it, 3.5 is a good projection in the sense that it would be the fair over/under at even odds.)

I say "in theory" because nobody actually does projections that way. If you consult the section on projections, you won't see anyone estimating the probability that Keenan Allen will score 0.0 points, and then doing the same for 0.1 points, 0.2 points, and so on all the way up to 60+ points before doing some multiplication and addition to get a projection of 9.5 points.

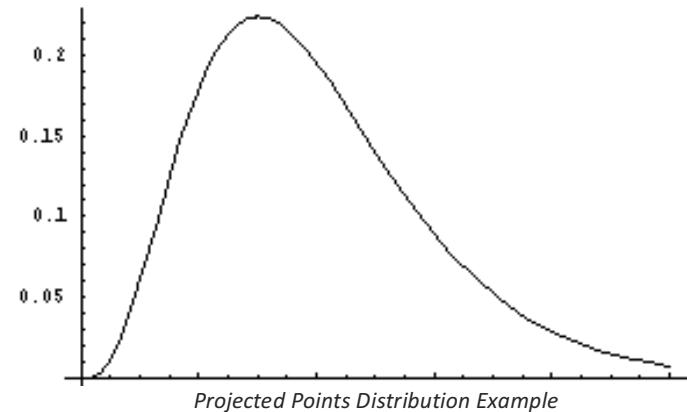
Rather, 9.5 points represents a decent estimate of his points if the game goes the way we expect—if Allen catches an expected number of passes for an expected number of yards and touchdowns, based on all the factors outlined in Section 4.5 on projections.

But we can reverse engineer that 9.5-point projection to tell us something about the implied distribution curve comprising all those other possibilities. If you know what a normal distribution is—sometimes called a "bell curve"—the distribution of probabilities implied by a player's projection will share a number of factors with that. (A player's distribution of point probabilities is not actually a normal curve. A normal curve is bilaterally symmetrical, but a player's fantasy-point distribution will be a bit skewed because it extends further to the right than to the left, where it reaches a fairly hard wall at zero. If you want to nerd out, a player's fantasy-point probability distribution is more like a gamma distribution than a normal distribution.)

For one thing, a player's fantasy-point probability distribution will generally be unimodal, which is a fancy way of saying that it generally has just one peak. And that peak will generally be roughly equal to the projection itself. So that means that while it is unlikely that Keenan Allen will score exactly 9.5 points, he is more likely to score 9.5 points than 10 or 11 or 12 points, or than 8 or 7 or 6 points. The further away the projection gets from 9.5, the less likely that particular point total will be to occur.

Different players, however, will have differently shaped distributions even if they have the same projected point total.

In a given week, Keenan Allen and Anquan Boldin may both be projected to score 9.5 points. But Anquan Boldin's distribution curve might be relatively tall and skinny while Keenan Allen's is relatively short and fat. What that would mean is that while both players should score around 9.5 points on average, Boldin is likely to score between 7 and 12 points, while Allen is likely to score between 4 and 15 points. While both players' projected point totals have the same *expectation*, Allen's projection has a greater *variance*.



Just as any individual player's projected point total will have an expectation and variance, so will any group of players. In fact, the group's projected total will just be the sum of the individuals' totals. As long as none of the players are playing in the same games, the same is true for variance. You find the group's variance by summing the variance of the individuals.

Keep in mind that when multiple players from the same group are playing in the same game, the variance of the group cannot be reached through a simple sum. The group's variance can be greater than or less than the sum of the individual players' variance, depending on how the performances of the individuals are correlated with each other.

For example, a quarterback's performance and his primary receiver's performance are positively correlated with each other—meaning that when one does well, the other will usually do well; and when one does poorly, the other will usually do poorly. In this situation, the variance of the two players as a group is *greater* than the sum of their individual variance.

By the same token, a quarterback's performance is negatively correlated with that of the defense opposing him. To put it another way, when one does well, it's bad news for the other. When considering a quarterback and the defense opposing him as a group, the group's variance will be *less* than the sum of the variance of the component players.

Here's something that's true of variance across all of life's uncertain activities: for the underdog, variance is a friend. It's the only thing giving the underdog a chance to win. For the favorite, variance is the enemy. It's what gives his opponents a chance to beat him.

How can we use that bit of wisdom in our DFS exploits? Consider the difference between cash games and tournaments.

In a cash game, let's say we think we'll have to score 110 fantasy points in order to finish in the money, and let's say that we construct a lineup that is expected to score 116 points. That makes us the favorite! If our expectations are calculated correctly, we'll win more than half the time no matter what. And in fact, if it weren't for variance, we'd win every time. With zero variance and a correctly calculated expectation of 116 points, we'd score 116 points with 100% certainty—never more, never less—and automatically beat our goal of 110. Zero variance is impossible in fantasy football (unless you start only players who are inactive, which we don't recommend), but as long as your expectation is above the projected cutoff to finish in the money, less variance is better than more variance.

In tournaments, on the other hand, your expectation will nearly always be out of the money. Let's say we think we'll have to score 140 points to cash in a particular tournament, for example, but our best lineup is expected to score only 116 points. With zero variance in this case, we'd be toast. The only reason we have a chance to finish in the money is because of variance—because of the fact that sometimes we'll score well above 116 points, and sometimes we'll score well below 116 points. It's the "above" part that we care about here. Even if our team scores only 116 points on average, with a high enough variance, we may score more than 140 points as often as 25% of the time. That will make us money if only 20% of the field gets paid.

So we see that, in cash games, we want a high expectation with a low variance; and in tournaments, we want a high expectation with a high variance. That means that in a cash game, we generally want to fill our roster with low-variance players, while in tournaments, we're happy to include more high-variance players.

How can you distinguish between low-variance players and high-variance players? There isn't a magic statistic that gives it away. The simplest rule of thumb, if you are a generally well informed NFL fan, is to ask yourself how well you think you can predict a player's performance in the upcoming game. If you think you're pretty sure you can pin down his likely production into a fairly narrow range, he's a low-variance player. If you have only a wild guess rather than a well-grounded estimate, he's a high-variance player.

In more concrete terms, high-variance players are likely to fit into one of the following categories:

**(1) His role in the offense is uncertain due to a teammate's injury.** An example would be Cincinnati's Giovani Bernard if Jeremy Hill is banged up and may not play his usual role. (Incidentally, Hill himself would be high-variance in that situation as well, but since FanDuel generally does not significantly discount a player's salary if he is banged up but expected to play, injured players generally don't provide great value, and should usually be avoided even if they offer high variance.)

**(2) His role in the offense varies significantly based on game script.** Maybe the Giants' Shane Vereen will get a lot of touches if his team gets behind early, but few touches if his team is protecting a lead. The prospect of the Giants getting behind early may be a worthwhile gamble.

**(3) He is a goal-line specialist who isn't a big part of the offense between the twenties.** This fits the boom-or-bust paradigm because the player could score multiple touchdowns, but if he fails to find the end zone he'll be nearly worthless.

**(4) He is a complimentary player in an offense that is expected to score a lot of points.** If a game becomes a shootout, even a team's No. 3 wide receiver could have a big day. Look for games with high over/unders.

### **3.2. Cash Games**

By John Lee

Failing to appreciate the differences between a cash-game roster and a tournament roster can be an expensive lesson for the beginner. To be clear, it is folly to construct DFS lineups for cash games in the same manner as tournament lineups.

To help you circumvent that lengthy (and costly) learning curve, the next few paragraphs will describe the factors and strategies that should guide a player's thinking process when building each type of lineup. There is an art to constructing DFS lineups.



In daily fantasy circles, the idea of value is perhaps the most frequently discussed topic. A beginner will put together a roster that he thinks will score a lot of points; a veteran knows approximately how many points he needs to win and uses value as a means to determine exactly whom to select for his lineup. But what exactly is value and why is it important?

To underscore the importance of value, let's first discuss its presence in our everyday lives. With our incomes, we seek out value in the material things and services that we purchase. If there are two gas stations next to one another, do you compare prices and give your business to the cheaper of the two? When considering cable options, do you price compare and try to negotiate a better deal between competitors? When purchasing a car, do you try to haggle the asking price to a lower level before agreeing to a sale?

The common denominator in all of these situations is that you, the buyer, are attempting to maximize the value of your dollar...much like an investor tries to do on Wall Street by buying low and selling high. The value that one achieves in these examples is known as *return on investment*, or ROI. The ROI in daily fantasy is measured in points per dollar and is the primary basis for decision-making during roster construction.

The term "value" is therefore a measure used to describe the number of expected points per dollar that a player can potentially return in any given week. There are two components to value: first, site-specific salary, and second, projected points in the site-specific scoring system.

The first component of that formula (salary) will become available on FanDuel on Sunday evening. Deriving the second component (projected points) will be discussed in detail in Section 4. If you are not inclined to generate your own projections, Footballguys provides all subscribers detailed projections by Wednesday of every week during the season, which dramatically lessens the workload for an otherwise busy player.



With these two pieces of information, one simply has to divide the player's projected points by his salary to determine that player's points per dollar. Many successful players build an Excel spreadsheet to sort all players by their values each week.

Once value is determined on a point-per-dollar basis, it becomes fairly simple to sort this column from lowest to highest. Viewing this list, even the most inexperienced DFS players can identify the best values for the upcoming week. If you have never opened an Excel spreadsheet,

your personal and professional life cannot permit such activities, or if you just cannot be bothered to spend the time to put together such a tool . . . the Interactive Value Charts on Footballguys.com accomplish this very task by Tuesday of every week, thereby eliminating the need to perform this weekly activity on your own!

With value determined on a point-per-dollar basis, it is now possible to begin working backwards to construct a solid cash-game roster. **At FanDuel, you should aim for 120 points to win your cash games.** A retrospective analysis of FanDuel cash games over the past several years has demonstrated that a score of 120 or above will win cash games approximately 90% of the time. With a \$60K salary cap on FanDuel, it becomes a simple math exercise to recognize that a winning DFS player must achieve 2 points for every \$1,000 spent on player salary.

Thus, when selecting potential players for a cash-game roster, the process should include dividing that player's salary by 1,000 and subsequently multiplying by 2 to determine the number of fantasy points he needs to score to reach value. For example, if Drew Brees' salary is \$9,800, he would need to score 19.6 fantasy points in order to justify his salary for cash games.

$$\$9,800 / 1,000 = 9.8 \times 2 = 19.6$$

Now that the scoring goal has been set, strategic player selection becomes the next objective. **There are two main considerations for optimal cash-game player selection: (1) a history of low variance, and (2) a high floor.** A history of low variance can be more succinctly defined as *consistency*. For cash games, we require a consistent, reliable performance from week to week. Starting a player who is consistent will ensure that your roster will not suffer from a one-catch, six-yard performance from your wide receiver or a nine-carry, 18-yard performance from your running back. Cash games are all-or-nothing propositions with tightly clustered scores in the middle of the final standings. Suffering a poor game at any position is often the difference between winning and losing.

It is therefore imperative to roster players who are heavily involved in their offensive schemes to ensure consistency of scoring. Logically, for wide receivers and tight ends, attention should be given to highly targeted receivers (for example, Antonio Brown in 2015). For running backs, consider players who routinely touch the ball 20 or more times out of the backfield (bonus

points for pass-catching backs like Devonta Freeman). For quarterbacks, use those guys who will throw the ball often, regardless of the game plan (for example, Drew Brees and Philip Rivers in 2015).

The second component of selecting solid cash-game players is to choose those individuals with a high floor. A player's floor is defined as the minimum number of fantasy points realistically projected to be scored in the upcoming game, barring unforeseen events (namely an injury). Not surprisingly, this parameter is closely related to the first rule, which stated that a cash-game player should exhibit low variance from week to week. A player who is heavily involved in his team's offense should score fantasy points through sheer volume of opportunity.

When touchdowns are so heavily weighted in the scoring system, yet also unpredictable, it is essential to roster players whose receptions and yardage can be loosely predicted based on their usage and importance to their team's overall offensive scheme. As a general rule, it is advisable to assume that a player will *not* score a touchdown. This will yield an absolute basement number for that player's floor that week. Once the floor has been determined for each player at a given position, particularly in the context of value, the number of viable options for cash games becomes quite limited.

Before moving onto other considerations for cash games, it is important to stress that you must exercise simple common sense when employing the aforementioned strategies. For example, if a WR2 has been heavily targeted for several consecutive games while the WR1 for that same team has been injured, do not expect that trend to continue when the WR1 returns from injury. Similarly, if a top-tier quarterback goes down to injury and is replaced by a rookie quarterback, *everybody* in the offense should be significantly downgraded to reflect the loss of leadership, experience, and overall ability on the field.

On the opposite end of the spectrum, do not be afraid to roster an inexpensive backup player at a given position if the primary player at that position is announced as inactive; the caveat is that you must have confidence that the replacement player will still see significant action in the new role. There are many potential mistakes that novice DFS players can make, but consulting with a reliable set of projections can often help avoid poor decisions.

One of the intriguing aspects of playing NFL DFS is that there are always a significant number of injuries from week to week that affect value at each position. For this reason, it is essential that a player first capitalizes on mispriced players due to injury or site-specific pricing mistakes (it happens from time to time). After those extreme value players find their way onto your roster, you should be looking to incorporate further value with consistent players who project to have high floors for that weekend.



All things being equal, the position that consistently demonstrates the least amount of variance is the quarterback position. Why? Because they are the *only* player who throws the ball in the passing game, whereas running backs tend to share rushing duties with other running backs and receivers are subject to similar restrictions (matchups, sharing targets, etc.). Thus, it often makes a lot of sense to spend a substantial amount of your salary (*after first earmarking extreme value as described above*) on the QB position because it is the position where the expected ROI is most likely to occur on a consistent basis. That said, it is completely inadvisable to spend so much at the QB position that you leave too little salary to strategically fill the remaining roster slots; one should therefore exercise caution to ensure that the selection of any single player is not too expensive such that it prohibits rostering other likely productive players.

Of all the required positions for DFS football, the kicker and defense positions remain the least predictable from week to week. In Section 4.3, we describe a retrospective-based system to help reasonably project fantasy output at those positions, but those projections are still limited by the highly variant scoring nature of those roster positions. In other words, it is advisable to construct your cash-game rosters with skill positions first and add the kicker and defense as ancillary components to your primary roster thereafter.

An often-overlooked strategic parameter of cash-game roster construction is the avoidance of negatively correlated players. A negatively correlated player is one whose on-field production reduces the fantasy output of another player on the same team. For example, if Aaron Rodgers has an excellent day throwing the ball for Green Bay, it is highly unlikely that the NFL defense he is facing will also have a strong performance. In cash games, where consistency and guaranteed points (floor) are valued, it rarely is logical to roster a QB and a team defense from opposing teams because those positions are often negatively correlated.

Positively correlated plays (e.g., a QB-WR combination) are generally used in tournament rosters (see the following section), but there is a positive correlation play or two that can be employed for cash games, the first of which is pairing a running back and team defense. It is common practice in the NFL for teams to build an early lead and lean on their workhorse running back in the second half to “run the clock” so as to force the trailing team into desperation mode late in the game. When losing teams are forced into becoming one-dimensional, they often make mistakes that lead to sacks, turnovers, and defensive touchdowns, all of which benefit the fantasy prospects of the opposing defense. For these reasons, if you feel strongly about a running back playing for a heavy favorite, stacking a running back and team defense is a solid positive-correlation play for cash games and tournaments alike.

Another correlated play that can be employed for cash games is to roster a running back and a kicker from the same team. This works best when Vegas predicts the pair's team to score a lot of points on their way to victory. Initially, this strategy might appear to be a negatively correlated play, but it mitigates risk without sacrificing much upside. The duo is likely to be playing with the lead, which will increase the running back's carries, especially in the red zone. With a conservative game plan late in the game, the team is also more likely to kick a field goal—something a trailing team might forgo to make up ground. If the running back doesn't score, then your kicker gets points for the field goal. If the running back does reach paydirt, your team also gets to tack on an extra point. When the game script plays out as expected, it's a win-win scenario for cash games.

### **3.3. Tournaments**

By Jeff Pasquino

#### **3.3.1. Forget cash-game mentality**

For DFS players who are used to playing cash games, where the goal is to just get a winning score, tournaments can pose a big challenge. Players have to forget all about trying to put together a lineup that has valuable and safe players who will definitely produce a respectable score in order to cash. The key difference one must realize is that, in a tournament, first place has extreme value. The biggest upside a cash-game player has is doubling his entry fee. Tournament prizes can be hundreds or even thousands of times the entry fee.

So what changes does a cash-game player have to make? First, do not just put a cash-game lineup in a tournament. While there is a chance that the lineup could earn a prize in any given tournament, a properly constructed cash-game lineup is particularly unlikely to take first place. A cash-game lineup, filled with steady, high-floor players, will be up against tournament lineups with more upside. Winning tournament lineups do not play it safe: they embrace volatile lineups, knowing that if the right combination hits, the payoff is huge.

In summary, the philosophy of a cash game is to win one of the prizes, as they are all the same value. The first-place winner is the same as the last team to win a prize, so there is no incentive to welcome risk. Safe, solid lineups win more often than not, and that is the lineup style of choice in a cash game.

Tournament philosophy is completely different, as the goal is to finish as high in the contest standings as possible to earn those big prizes given out to the best scores. Taking on risk here is not only suggested but required. An appetite for risk, however, should not be confused with reckless abandon. Selecting a lineup constructed with some players who can hit it big in a given week can result in a Top 1% finish and a big prize. Without taking on some level of risk, achieving a first-place score is almost impossible.



#### **3.3.2. Value, upside, and the right combination of both**

There are many ways to build a lineup for a given contest. By studying the most successful strategies that have resulted in top finishes in GPP tournaments, several themes can be extracted. Combining the right groups of players who meet certain criteria is not necessarily a guarantee for success, but by considering how to build a lineup for a tournament, we can increase our chances of winning it big and taking home a top prize.

## ***Value plays do matter, but upside matters more***

When finding the right players to put in your tournament lineup, many will target value plays first. That's a good starting point, as these can be the foundation of a solid score that leads to a Top 1% finish. Most weeks, if value plays can be found for cash games, but a key question has to be asked first—what does it mean to be a value play for a tournament contest?

Back in the discussion of cash games, we defined a value player as “2x player,” which means that the player is expected to score at least twice as many fantasy points as his salary divided by \$1,000. That means a \$7,000 wide receiver has to be expected to score 14 or more fantasy points to reach value for a cash game. For tournaments, the bar needs to be raised. As one learns by studying successful tournament lineups at FanDuel, lineup scores in the range of 180 total points are required for a Top 10 finish, so that translates to a tournament value player to be a “3x player” or better. That severely reduces the population of value players each week.



This guideline can help a player narrow the list of players who can be considered for their weekly lineup.

To find players who can reach tournament value, a player should calculate what it would take for a player to reach a fantasy score in accordance to the needed multiplier of his salary. Going back to our earlier example of a \$7,000 wide receiver, he needs to get to 21 points to get full tournament value. One way to see what that would take is to start with a baseline of 100 yards and a touchdown and see what that would work out to be in points. Let's assume this player needs six catches to get to 100 yards and find the end zone.

With FanDuel's half-point-per-reception scoring, a 6-100-1 stat line yields three points for the six catches, 10 points for 100 yards, and six more for the score—a total of 19 points. That is nearly value right there, so tweaking the numbers a little to 7-115-1 gives 21 points. So the question a player needs to ask about a given \$7,000 wide receiver is this: how easily can he attain a statistical performance of 7-115-1 this week? If the answer is that he can do it pretty easily or that there is a strong likelihood of getting 7-10 catches, 100-120 yards and a touchdown, then he passes the test and can be on the short list of options for your tournament lineups.

## ***Upside***

Another way to find players capable of making points for the week is to consider upside plays. These are players who typically do not cost as much as normal weekly starting fantasy options, but given their lower salaries they can reach value with their matchup for the coming week. A typical example is a backup running back who is expected to see far more action than expected due to an injury to the normal starter. A \$5,000 running back who should get 20-25 touches is not normal, but when it does happen (and it happens far more often than most realize) then he immediately gets on that short list for DFS tournament consideration.

Note that this same player is likely to be on cash-game lists as well, and for good reason. Any player with a high probability of getting to tournament value is, by definition, a cash-game option. This goes back to the mentality discussion earlier in this section where you have to remember what your goal is for each and every lineup you create. Some players will pass the criteria for both cash and tournament rosters, but that does not mean that all of the cash players will be worth a tournament lineup spot.

True upside plays often come from opportunities that arise during an NFL week. Injuries, suspensions, benchings, and depth chart changes can turn a minimally priced player at the bottom of the DFS salary list into a player with upside value. It is not hard to imagine a new starting player with a bargain basement salary that has starter snaps and production to have a much higher likelihood to reach tournament value based on that new status. These players have to be at the top of a player's weekly list for lineup consideration.

### ***Variance and Volatility***

Because touchdowns are relatively rare, there is substantial, inherent variance in DFS football production. This volatility in production is often considered a negative when it comes to cash games, as a cash-game player wants to have a safe and productive roster. Unlike cash games, tournaments force a player to consider variance a positive factor and to embrace the volatility in scoring (within reason). Rostering a wide receiver that only scores once in a while is a risky play in a cash game, but a tournament player is an eternal optimist, focusing on his team's potential when the stars align and his players do hit it big.

### ***Uniqueness***

It goes without saying that if you finish at the top of a tournament, you definitely do not want to split that top prize with anyone else—but that is not the main reason you want to have a unique lineup. If a DFS roster has a player who is not owned by many other teams and that player has a huge game, that team is that much further ahead of the competition.



Immediately after a tournament begins, FanDuel displays the ownership percentage of each player—the percentage of teams in that tournament that the player is on. For example, in a 1,000-entry tournament that has 100 teams using the Seattle defense, the Seahawks' 10% ownership will be shown.

One way to think about uniqueness is to remember the old saying, “A rising tide lifts all boats.” If a player is on everyone’s roster, his performance helps all teams by the same amount—which is to say that it helps no one. If just a few teams lack that player, those teams will find themselves ahead or behind the great morass of teams that do have him (depending on his performance) and that is a good situation for those few teams. Being one of the top few teams half the time and one of the bottom few teams half the time is better in a tournament than being stuck in the middle all the time. Uncommonly owned players are the ones with the greatest potential to pull you away from the middle and separate you from the crowd. This is where a savvy player can improve his chances by finding players who are likely to be off the beaten path.



A running back who is suddenly active at the last minute (or starting due to a last-minute scratch) could increase your uniqueness, just like owning a player who is coming off of an injury that many will want to avoid. The key is to find players who will be uncommonly owned for reasons *other than that they are poor values*. Rostering a unique player who performs poorly will uniquely hurt your team, so you’re looking for players with decent value that others are overlooking...not for players with terrible value whom others are rationally avoiding.

Discussions about the value of unique lineups continue in DFS circles, as it is not clear whether a unique lineup is truly necessary to win the top prize in a GPP contest. There is no question that winners of major contests typically have at least one high-performing player who is not widely owned. It is also true that winning rosters do not typically have a great number of such players—usually three at the very most. Even in tournaments, there is such a thing as *too much* risk.



## **Stacks**

Tournament lineups that finish at or near the top of GPP contests often have what are considered “stacks,” which are teammate pairings of quarterback and either a wide receiver or tight end. The theory behind this goes back to embracing upside, as a big game by a receiver or tight end for a given team assures a good game by the quarterback. Lineups that have one of the best wide receiver performances of the week will greatly increase the chances of having a prize-winning roster, but that likelihood significantly increases if the lineup contains that receiver’s quarterback as well.



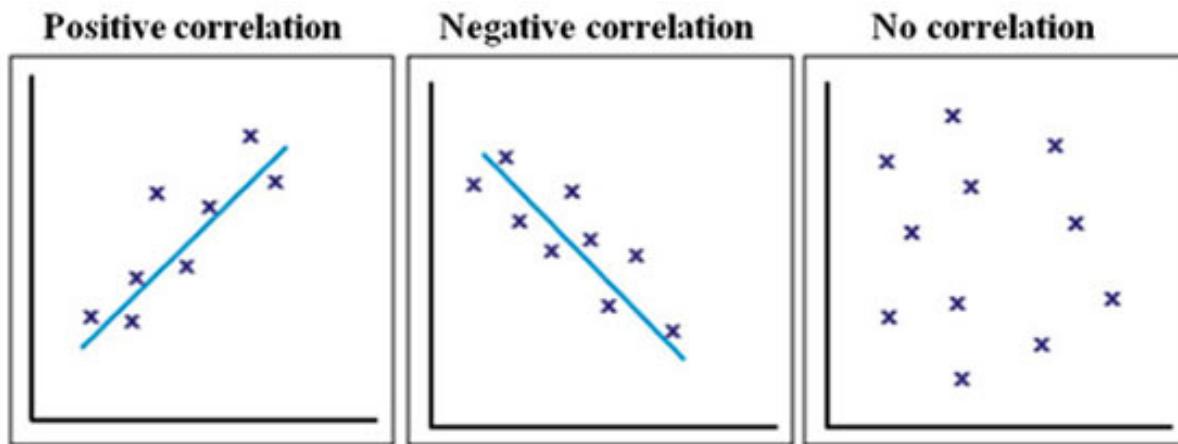
Another stacking concept that is sometimes used by successful lineups is pairing some combination of an NFL team’s running back, kicker, or defense. A team with a big lead and a strong defensive showing will likely run the ball in the second half of the game, resulting in bigger numbers for the lead rusher.

## ***Correlations: Positive and Negative***

The reason it makes sense to stack a quarterback with his wide receiver (or a running back with his defense) is that their performances are positively correlated with each other. This means that the performance of one of the pair is tied closely to the other, and that the direction of the performances is the same (a good game by one usually means a good game by the other).

Players’ performances can also be negatively correlated with each other: a good game by one usually means a bad game by the other. For example, taking two running backs from the same NFL game (usually opposing starting running backs) can give a negative correlation. While it is quite possible that one of the two backs will have a big game, it is rare for two backs in the same game to both put up big numbers.

In tournaments, positive correlations are sought after, while negative correlations are to be avoided.



One of the best (and easiest to avoid) examples of negative correlation is a team defense opposite your starting quarterback. If the quarterback has a big game—exactly what you want—then the defense is not going to have a good performance. Similarly, when the defense has a great game, the quarterback probably won't. In general, you should avoid rostering a team defense that faces any of your offensive players.

### ***Which Games to Target; Vegas Is Your Friend***

Players who score a lot of points can generally be found in high-scoring games, so that's a good place to look for them. Which games will be high-scoring? We can't know for sure, but we can get a pretty good clue from the sportsbooks. By looking at the betting lines published on any number of sites, you can find both the expected point total (i.e., over/under) and the point spread for every NFL game in the coming week.

By doing some simple math, you can calculate the expected number of points a team is expected to score for each game. Here is an example:

Philadelphia (51)

Dallas (-3)

The 51 represents the total expected points for the Eagles-Cowboys clash. Dallas is favored by three points as shown by the “-3” next to Dallas, so by subtracting that number from the total we have 48 points. Divide that evenly to the Eagles (24) and Dallas (24) and adding back the three points that Dallas was given by Las Vegas and we see that the expected points for this game is Cowboys 27, Eagles 24. Now that is not a guarantee by any means of the outcome of that contest, but it is a very good indication of what Las Vegas expects to see as the most likely outcome.



N.F.L.	WEEK	-	-
401 VIKINGS	-10	-600	
402 RAMS	41	+400	
403 COWBOYS	-8	-400	
404 CHIEFS	42.5	+300	
405 REDSKINS	37.5	+165	
406 PANTHERS	-3.5	-185	
407 BUCCANEER			3
08 EAGLES	-14.5	3	
09 RAIDERS			3
10 GIANTS	-15	3	
11 BROWNS	41	+2203	

By doing the math for all of the coming contests for the week, we'll see that several teams are likely to be at or near 30 points or more. Those are the teams that should be targeted for offensive players. Taking players in contests with totals near the higher end (usually 50 points or more) is also a good idea. Building a lineup around players in high-scoring games is a worthwhile tactic.

### 3.4. Tell a Consistent Story

By Maurile Tremblay

Telling a consistent story means that your lineup's success should not depend on mutually contradictory occurrences. For example, don't pick a high-priced quarterback and also pick the high-priced NFL defense he is going against. For each of those selections to reach value, they'll both have to have great games; but a great game by a quarterback and the defense he faces is contradictory. The quarterback's success comes at the defense's expense and vice versa.

In cash games, the story your roster relies on should be consistent because it should generally be the same story that is told by the Vegas spreads and over/unders.

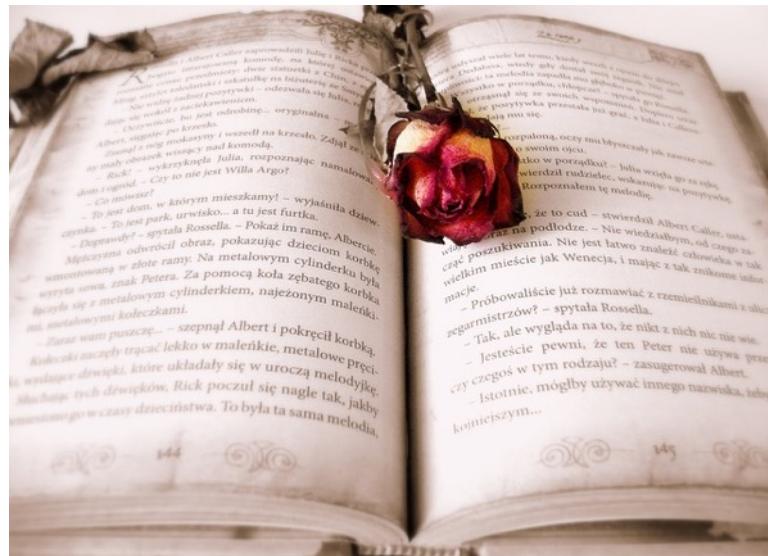
In tournaments, the story your roster relies on may vary from the story told by the Vegas spreads and over/unders, but it should vary in a consistent way.

Consider a toy game we might play with a six-sided die. You can select any real number you want, and your score is determined by how far off you are from the result of rolling the die. If you pick 5 and the die lands on 2, for example, you were three off, so your score is minus-three.

In a head-to-head contest, choosing 3.5 would be a perfectly good strategy, but picking 6 would be terrible. If you pick 3.5, you'll be off by 1.5, on average, and you'll never be off by more than 2.5. If you pick 6, you'll be off by 2.5, on average, and you'll sometimes be off by 5. Someone who picks 3.5 will beat someone who picks 6 two-thirds of the time.

Now consider a mid-sized winner-take-all tournament instead of a head-to-head contest. Picking 6 becomes a decent strategy while picking 3.5 is horrible. To win, you're pretty much going to have to nail the exact result. That means 6 will win about one-sixth of the time while 3.5 will win never. You may have deduced that the best strategy in this game is to pick the integer between one and six (inclusive) that your competitors are least likely to pick. If you can find a number that is picked by fewer than one-sixth of the field, you will have a positive expectation (ignoring any rake).

Let's translate what that means for DFS games.



The story told by the Vegas spreads and over/unders can be thought of as the most likely scenario. In a cash game, you want to play it safe and construct a roster that is consistent with the most likely scenario.

In a tournament, however, especially those with top-heavy payout structures, you will not want to play it safe. Although the Vegas lines might represent the most likely scenario, the actual results from the NFL games will likely depart from the Vegas lines in a number of ways. The contestants that finish high in DFS tournaments will be the ones whose lineups depart from the Vegas lines in the same way that the actual NFL results do.

To oversimplify things in what is hopefully an instructive way, consider three scenarios:

**Scenario A:** Results from NFL games closely mirror the Vegas lines (and mainstream projections consistent with those lines).

**Scenario B:** Results from NFL games mostly mirror the Vegas lines, except the Packers score far more points against the Bears than expected.

**Scenario C:** Results from NFL games mostly mirror the Vegas lines, except the Packers score far fewer points against the Bears than expected.

Let's give Scenario A a probability of 40%, and let's give Scenarios B and C probabilities of 30% each.

If your opponents' lineups are distributed evenly, such that one-third of them are consistent with each scenario, it is apparent that the bulk of your lineups should buy into Scenario A. Your chance of finishing high in the standings is proportional to the product of (a) the reciprocal of the fraction of the field going with the same scenario you are, and (b) the probability that your scenario is the right one. (The reciprocal of a fraction just reverses the numerator and denominator, so the reciprocal of 1/3 is 3/1, the reciprocal of 2/5 is 5/2, etc.) In this case, Scenario A ( $3 * 40\% = 1.2$ ) gives you a better expected result than Scenario B ( $3 * 30\% = 0.9$ ) or Scenario C ( $3 * 30\% = 0.9$ ).

But in DFS contests, even in tournaments, your opponents' lineups will not be evenly distributed across all scenarios: they will tend to cluster around scenarios most consistent with mainstream projections that are based on the Vegas lines. So let's say that instead of 33/33/33, your opponents' lineups are distributed as follows: 50% are consistent with Scenario A, 30% are consistent with Scenario B, and 20% are consistent with Scenario C.

In this case, your best bet is to submit a lineup consistent with Scenario C. Scenario C ( $5 * 30\% = 1.5$ ) is preferable to Scenario A ( $2 * 40\% = 0.8$ ) or Scenario B ( $3.33 * 30\% = 1.0$ ).

Going with Scenario C here is similar, in the toy-game example above with the die, to picking the number 6 when fewer than one-sixth of the field is doing so. The general rule is that if you

think there is an X% chance that a particular departure from the Vegas line will come to fruition, and you think that Y% of the lineups submitted by your opponents will be consistent with that departure, it makes sense to submit a lineup based on that departure as long as  $X > Y$ . (Poker players might find an analogy here to the concept of pot odds.)

The key, though, is that any departure or departures from the Vegas lines that one of your rosters is based on must be self-consistent. If you are adopting Scenario C above, that doesn't mean only that you should be less likely to include Aaron Rodgers in your lineup. It also means that you should be less likely to include Jordy Nelson in your lineup, and more likely to include the Bears defense in your lineup. Don't simply add to or subtract from one player's projected points. Players in the same game are interrelated, and if you're adding to one player's projected points, you must add to or subtract from other players' projected points in a way that is consistent with the story you're creating.

(The concept of stacking can be derived from this way of thinking.)

### **3.5. Fit Lineup to Contest, or Contest to Lineup?**

By Maurile Tremblay and Mark Wimer

When it comes to fantasy football of any sort, there's rarely a single, correct way of doing things. Some DFS lineups are better suited for cash games, and others should be used in tournaments. Ultimately, there can be several methods for generating the same lineup.

Consider a player who only enters cash games. He could make a list of 20 solid lineups without optimizing them for cash games—he's just trying to maximize expected points. After he has 20 lineups, he can select the ones that are better suited for cash games and enter them into his contests.



That strategy will probably work just fine, but that seems like a lot of unnecessary work. Why not optimize those lineups for cash games in the first place? He could avoid QB-WR stacks and choose Steady Eddies over boom-or-bust players from the start. Why construct five times as many lineups just to throw 80% of them out?

On the other hand, consider someone who is planning to enter both cash games and tournaments. Now either strategy becomes sensible. He could construct a lineup designed to maximize projected points and decide later which type of tournament to enter based on the characteristics of the lineup. Alternatively, he could construct one lineup that he knows is destined for a cash game and then build another lineup specifically for a tournament.

It's simply a matter of preference, and readers are encouraged to try it both ways to see which suits them better.



### **3.6. Other Considerations**

#### **3.6.1. Thursday vs. Sunday contests**

By Phil Alexander

Thursday night contests use the same rules and scoring systems as Sunday-Monday contests but allow you to build rosters with players from every game on the weekly slate.

Though they add only one game and a few players to your preparation, there are important reasons why Thursday contests require a different approach from Sunday-Monday contests:



**Thursday contests mean Thursday night roster locks.** Your roster cannot be changed once the Thursday night game kicks off. Breaking developments impact player values between Thursday night and game time on Sunday every week, presenting you with an obvious dilemma: Should you chance using a player if you're uncertain about his playing status?

**Thursday contests test your discipline.** Once football season is in full swing, three days without an NFL game can feel like an eternity. By the time Thursday rolls around, it's natural to be craving a little action—and what better way to scratch the itch than watching your fantasy players in the Thursday night game? Here's where you have to be careful with Thursday tournaments. If you allow the urge to get some skin in the game to cloud your judgment, you'll make poor roster decisions and sink your lineups.

**Thursday Night Football can be ugly football.** Whether it's because the schedule makers just have a knack for showcasing lousy or mismatched teams, the teams don't have enough time to prepare, or the players don't have long enough to recover from the previous game, Thursday Night Football can be dreadful. Enough data exists to suggest Thursday games are detrimental to fantasy performance, with those involved in the passing game at highest risk.

Fortunately, there are several strategies you can employ to avoid the traps of Thursday contests, capitalize on the mistakes of others, and consistently turn a profit.

### ***The Thursday Night Fade***

If you take only one lesson from this section, make it this one: In large-field tournaments, it will almost always be correct to avoid players from the Thursday night game.

Novice and casual DFS users cannot resist watching their fantasy players on national TV. Their thirst for action (and disregard for good process) will typically inflate the ownership percentages of Thursday players, regardless of whether or not the circumstances actually warrant it.

As you read in the earlier section on tournament play, there's value in owning at least a few unique players. For this reason alone, fading the Thursday night game will generally be the correct play in tournaments.

Perhaps more importantly, recent trends show fantasy scoring to be worse on Thursday night. This is particularly true for passing production. Unless the Thursday night game includes at least one elite passing offense, it makes sense to fade these players.

Since 2012, when the NFL expanded its Thursday night package from 8 to 13 games, fantasy production in the passing game is down about 4.5% on Thursday nights compared to other games.

### ***A Positive Note on Thursday Running Backs***

If you can't resist the urge to use a player from the Thursday game in your lineup, choose a running back. Over the last four years, fantasy production in the running game is about 8% higher in Thursday games than in Sunday games. Rushing touchdowns have been especially more frequent on Thursday nights. Across the four-year sample, there were 1.74 rushing touchdowns per game scored on Thursday versus 1.42 per game on Sunday -- a 20% increase in rushing touchdowns per game.

### ***Avoid Questionable Players...Most of the Time***

Since you cannot make any changes to your lineup after the Thursday game kicks off, you are forced into an early decision on players whose injury statuses are still unknown. You must decide on Thursday whether an injured player is worth risking in your lineup. You're also forced to decide whether to take a chance on the players who stand to benefit most if the injured player is inactive or ineffective.

It's difficult enough to set a winning lineup when you have all the information you need readily available. When you're essentially flying blind regarding a player's Sunday availability, the correct play is to fade both the injured player and his teammates, especially in cash games. If you include an injured player in your lineup and he ends up sitting out, your roster will be dealt a crippling blow.

A zero in your lineup all but guarantees you'll have no shot at a deep run in a GPP, and makes it very likely you'll fall below the cash line as well. Likewise, if the injured player suits up on Sunday and you rostered his backup (or a teammate who was in line for a bigger role), your team's ceiling has been lowered appreciably.

This isn't to say that taking a chance on players with injury concerns or questionable workloads in a Thursday GPP can't pay off in a big way. Most DFS players will take the conservative approach and avoid using players with unclear Sunday outlooks. If you're one of the few who takes a big swing, and the Sunday morning news works out in your favor, you'll be rewarded with a lesser-owned player with huge upside. Which strategy you decide to use should depend on your risk tolerance and percentage of bankroll devoted to the contest.

### ***Gaining Intel for Sunday Tournaments***

When you enter a large-field Thursday tournament on FanDuel, you're getting more for your entry fee than just a chance to win a share of the guaranteed prize pool. You're also gaining an invaluable research tool to help you make educated guesses at player ownership percentages in Sunday tournaments.

After the Thursday night game kicks off, you'll be able to see the ownership percentages of all players on your roster. While Thursday ownership percentages will not exactly match the ownership percentages of Sunday contests, they provide a reliable guide to how the crowd values particular players in any given week.



A winning GPP lineup usually includes at least one or two lesser-owned players, and you'll now have an easier time identifying which players are the ones flying under your opponents' collective radar. You'll only be able to see ownership percentages for players on your own roster. To collect ownership data for lots of players, you'll need to enter multiple lineups that include all the players you're curious about.

If this sounds too expensive, remember that FanDuel offers multi-entry tournaments that begin on Thursday night for as little as a dollar. If you construct your lineups carefully, there's a strong chance these "exploratory" lineups will cash (or at least break even).

If you'd rather not invest a percentage of your bankroll in Thursday tournaments to gauge ownership rates (or lack the time to organize the data), you'll have access to this valuable information with a Footballguys subscription. Our team collects and analyzes Thursday ownership data and explains how to best use it in clear and concise articles every week.

### **3.6.2. Early-Year pitfalls**

By Mark Wimer and James Brimacombe

The NFL offseason brings nine months of dramatic reshuffling around the league. Coaching changes, scheme adjustments, free-agent movement, player releases, draft picks, ongoing recoveries from last season's injuries, depth chart reversals, new injuries, suspensions, and other changes ensure that the NFL landscape in September will look much different than it did the previous December.



The identity of each NFL team starts to form during organized team activities in May and June, and continues to evolve through training camp and preseason games in July and August. Astute DFS players can learn from news blurbs and preseason games, but there will be misleading distractions along the way.

Offensive veterans have their practice time managed during OTAs and camp practices, and they rarely see meaningful playing time in preseason games. Limits on practice time may strain offensive chemistry, especially for teams installing new offenses. We often read reports during the preseason that some player or another is in line for a bigger role in the offense this season, but such reports often prove overly optimistic.

Defenses are also still working out kinks late in the preseason. Coordinators platoon along the defensive line and in the secondary more often than ever. Every year, defenses projected to be good fall flat while defenses projected to be poor overachieve.

All of this leads to more uncertainty about player performance in the first month of the season than in later months. Player projections built on this uncertainty are therefore more speculative than later-season projections, which are built on better data and surer trends.

#### ***Navigating the Early Uncertainty***

Uncertainty shouldn't scare you. In fact, some players exploit and thrive on uncertainty—when they correctly recognize it.

Some DFS players turn a profit in cash games and GPPs in the early weeks. Are they exploiting the uncertainty with a sound strategy we can apply during these early weeks?

Not necessarily.

Unfortunately, the observation that some people win during the early weeks does not mean that there is a winning strategy during the early weeks. It does not mean that anybody was playing with a positive expectation. After all, some people win state lotteries—but there is no

such thing as a winning strategy for that, and nobody plays with a positive expectation. Sometimes the winners simply got lucky, which is not a reproducible strategy.

Nonetheless, you can still recognize and plan for the extra uncertainty:

*I believe you should limit your exposure in the early weeks. Wait for defensive strengths and weaknesses to show themselves and provide the data needed to exploit matchup-pricing inequalities. In the first four weeks of the season, I suggest betting only about a quarter of the amount you'd typically wager later in the season. Trends will emerge and you will have ample opportunity to leverage more of your bankroll when your edge is greater. —David Dodds*

*Bankroll management is critical early in the season. Self-restraint can be difficult when you have been waiting eight months for the game you love to get back on the field. But you must avoid digging yourself into a hole or busting your bankroll early. Wait for exploitable trends to emerge before you risk a high percentage of your bankroll. —James Brimacombe*

*DFS takes skill, even in the early weeks. Some people will have a greater expectation than others. Even if a DFS player does have a positive expectation in the early weeks, however, it's likely to be less positive than in later weeks. Wagering a lower-than-normal percentage of your bankroll in the early weeks is therefore warranted. —Maurile Tremblay*

*If you are highly analytical and build your lineups based on projections, it makes sense to go light in the first quarter of the season until you have more reliable data. If you are more observational than analytical in your approach, it may be correct to be more aggressive early. —Dan Hindery*

*Incomplete information makes projections less accurate from top to bottom in the early weeks. Often that means the total points needed to finish in the top ten of large GPPs is significantly lower during these early weeks. The minimum threshold to cash will also be lower. The best chance to take down a large GPP may be during the first four weeks. —BJ VanderWoude*

Uncertainty during the early weeks makes it harder to project player performance accurately. That means a wider range of expectation for all players, regardless of talent and opportunity. A wider range of expectation means higher variance in your lineups.

And variance, usually, is the enemy of your bankroll.

So, it makes sense to strongly consider limiting your exposure during these earlier weeks. But your decision should be based on your personal philosophy of bankroll management and confidence in your lineup in any given week.

If you feel you're flying blind without multiple weeks of trends to consider, you may choose to sit out the first week (or more) entirely and save your bankroll for weeks with a higher positive expectation.

If you're confident that you've put together a high-floor lineup, you may be comfortable exposing a higher percentage of your bankroll but still keeping it under your usual weekly exposure.

If you're a high-variance GPP player, you may welcome the uncertainty of the early weeks and not change your approach much, if at all.

Regardless of how aggressive you choose to be, approach these weeks with a level-headed plan in place. Your bankroll will thank you.

### **3.6.3. Impact of weather**

By Alessandro Miglio and Maurile Tremblay

Fantasy and DFS owners generally overestimate the effects of weather on player production.

Precipitation, whether rain or snow, doesn't negatively impact offenses as much as you'd think (though it does adversely affect kickers). A wet environment may make it harder to carry, throw, run routes, catch, or cut with the football. But it may also make it more difficult for defensive backs to cover receivers and for defensive ends to pass-rush.



Warm temperatures can cause cramping and cold temperatures can make it difficult to handle the football. But the rise of domed stadiums, cooling fans, sideline heaters, halftime IVs, and other interventions have largely removed temperature as a limiting factor for offenses.

What does seem to affect player performance, though, is wind. Passing offenses are particularly negatively affected, with the league producing fewer passing and receiving yards and total points in the colder months of the season. Conversely, wind is helpful for fantasy defenses.

Teams pass the ball less as wind speeds increase. At speeds over 20 miles per hour, teams have generally passed on average 10%-15% less than usual. There has been no such decrease with colder temperatures. There has also been a small decrease in yards per pass attempt as wind speed increased.

If you use over/under lines and player props or a set of projections that takes weather into account, wind speed and temperature and precipitation are already priced into player value.

But a small edge can swing the balance of your DFS contest—cash or GPP. Weather, especially wind speeds, can affect both the floor and ceiling of a player you're considering. If there's even a small chance that unexpectedly bad weather may decrease point potential, it's worth considering a comparably priced and similarly projected option in better weather.

### **3.6.4. Entering contests early and then adjusting dummy lineups**

By James Brimacombe and Steve Buzzard

Finding and exploiting small edges is a key part of a successful cash-game strategy. Improving your chances of winning by just a percentage point or two can turn a losing week (or season) into a winning one. One of the most overlooked ways to improve your return on investment is to begin signing up for contests early in the week.

If you're a high-volume cash-game player, you'll need to enter the early week contests by necessity. It's the only way to ensure you can enter the number of games at the price point you want. But there are also good reasons for small-volume players to consider entering early week games.

Signing up for cash games, especially 50/50s and Double Ups, as soon as they are posted often pits you against players who put in a lineup early in the week but then forget to adjust that lineup for injury news, depth chart updates, and weather changes. Playing against those suboptimal lineups can give you a significant advantage.

Waiting to enter contests until Sunday morning, on the other hand, often matches you up against players confidently entering their most optimal lineups. These are the contests the sharks are entering as often as possible after making their last-minute changes.

Of course, you must submit your own suboptimal lineup when entering these early week contests. Be sure you'll be available to make improvements to these lineups later in the week. While you can enter your current best lineup, it's easiest to enter the same placeholder lineup for each contest. A simple way to do this is to choose a roster full of low-salary players you have no interest in using. You can tweak just one of these lineups on Saturday and then export that lineup to your other contests quickly and easily.

Let's consider a real-life example of this during Week 3 of the 2014 football season.

Leading up to the kickoff of the Thursday night game, two significant inactives were announced. Both, while not shocks, were slightly surprising as it was announced Roddy White and Doug Martin wouldn't be playing. We also found out that there was now a chance that Jamaal Charles would play on Sunday, where it was previously predicted that he would not be playing. This significantly changed the values of Julio Jones, Harry Douglas, Bobby Rainey, and Knile Davis. Due to these changes, I quickly reshuffled my projections, which in turn changed my value rankings.

Which type of DFS player is going to be in the best position to take advantage of such changes in value? The player who submitted his lineup on Tuesday morning and is now sitting at the bar hanging out with his friends, or the player who is sitting at home signing up for games?

Personally, I want to play against opponents who don't update their rosters shortly before kickoff, which usually means players who signed up on Tuesday morning.

To fully illustrate this specific example, let's dig a little deeper. I was in some Double Ups that specific week that had opened up early in the week and some that had opened up just hours before game time. Let's look at the difference in player selection for some of the key players mentioned above.

Player	Early Week Ownership	Thursday Ownership
Bobby Rainey	5%	45%
Julio Jones	10%	32%
Harry Douglas	1%	9%
Knile Davis	11%	1%

We see exactly what was expected. Many people who built their rosters early in the week didn't update their lineups when new information presented itself. They missed out on value by falling asleep at the wheel. Lineups set closer to kickoff are more successful because they reflect the latest news and injury updates. By signing up early in the week with placeholder lineups and updating your rosters close to game time, you'll increase your chances of winning by facing weaker opponents with outdated lineups.

You can also enter these placeholder lineups into GPPs early in the week, especially for those tournaments you know are likely to fill each week. You can improve these placeholder lineups and export them as you would your cash-game lineups.

Using placeholder lineups is a smart way to increase your weekly bankroll exposure in cash games and tournaments. While you will undoubtedly see some high volume and highly successful usernames sign up alongside you, the percentage of weaker DFS players (and lineups) will be higher, too. If you are certain you'll be able to adjust your early week entries, getting into numerous games against opponents with weaker lineups should be a part of your weekly strategy.

### **3.6.5. Sunday inactive lists**

By Maurile Tremblay

All the work we put into formulating our lineups during the week can be rendered moot when a player is unexpectedly declared inactive 90 minutes before game time. If we've got DeMarco



Murray in 20% of our lineups and we find out on Sunday morning that he's not playing, we've got to adjust—fast!

Exactly how big a problem this is depends on your style of DFS play. If you tend to play on just one site and enter only a few contests each week, you can generally reformulate your lineups from scratch on Sunday morning based on the latest sets of projections. Inactive lists generally come out 90 minutes before game time, and the projections at Footballguys.com are generally updated at least 50 minutes before Sunday's kickoffs. If you're only adjusting four or five lineups, you should have time to

check these projections and start over if you need to on Sunday morning. If you will not be available to adjust your lineups on Sunday morning, we recommend that you mainly stick to Thursday contests. It is a severe disadvantage to be unable to adjust your lineups on Sunday morning when many of your opponents will be doing so.

But if you are playing hundreds of contests across numerous DFS sites, you will not be able to reformulate each of your lineups from scratch. You'll need to engage in a bit of triage.

If you lose a running back, as in the DeMarco Murray example, you may be able to find another running back you like nearly as much for the same price. In that case, a simple across-the-board substitution will solve your problem.

But you might choose to switch Murray out for his now-promoted NFL teammate, Derrick Henry, who happens to have a cheaper salary. You now have extra money to spend at other positions. It's easy to get caught up making multiple changes to your lineup in that scenario, trying different combinations at lots of different positions. The problem, of course, is that kickoff is fast approaching, and you can't dawdle around making four or five substitutions per affected lineup.

The best way to handle a critical last-minute adjustment is to flag all the lineups affected by a late scratch. Then start with the lineup with the greatest dollar amount riding on it (whether in a single contest or in multiple contests). If you have time, and if you're well organized, you can keep the characteristics of this lineup that gave it its purpose—maybe it was a Matt Ryan-Julio Jones stack you want to anchor all your tournament lineups, or maybe it was diversifying away from Arian Foster because otherwise he's in too many of your lineups. If you have time, go ahead and keep Ryan and Jones, or go ahead and exclude Foster, and start building your lineup back up with Derrick Henry.

When you start to run low on time, you may have to give up your meta-lineup considerations, like using the Atlanta stack or diversifying away from Arian Foster. Just clear your lineups with Murray, and import non-Murray lineups in their places. You may end up with more copies of the same imported lineups than you'd like—and with less diversification than is optimal—but that's better than including a scratched player in your lineup.

These surprise late-scratch situations will happen to even the best DFS players. If the late scratch wasn't a surprise, you shouldn't have had that player in your lineup to begin with. You can't plan for a specific scratch in a specific week, but you can have a general plan to handle these surprises when they occur.

Make sure you're available to make last-minute adjustments to your lineup when needed.

#### ***4. Evaluating Players***



## **4.1. Different mindset from traditional redraft**

By Maurile Tremblay

In traditional leagues you acquire players who may not be fantasy starters, but who will become worthwhile later. Talent and opportunity are both important, but in the long run, talent wins out. Your scouting eye uncovers diamonds in the rough who end up having tremendous value once they show some polish.

In daily fantasy, none of that matters. The long run is irrelevant. If a player is working his way into a featured role but is still a few weeks away, forget about him. You gain no advantage from being a better scout than your DFS opponents, identifying long-term potential, and buying before others catch on. Much like NFL coaches tell their players, we are focusing only on this coming week.



But shouldn't we roster players poised to break out *this week*? As a rule, no. In daily fantasy we value proven performers over breakout candidates.

To be sure, there are situations where a player is getting his first start due to a teammate's injury, and he's terribly underpriced because the injury was confirmed after his salary was set on Sunday evening. These players are often worth rostering, but it's not because we're expecting a breakout performance. It's because they're priced so low that even a run-of-the-mill performance will provide solid value.

Identifying and grabbing genuine breakout candidates has both a higher risk and a lower reward in daily fantasy than it does in year-long leagues. The risk is higher because you have to identify both the right player *and* the right week. If you're a week or two early in season-long leagues, the player will still help you eventually. Not so in DFS. If you identify the right player a week early, you don't get partial credit. You lose.

Even if you totally nail a breakout prediction in DFS, you'll benefit for exactly one week. This isn't a traditional fantasy league where you reap the rewards for the rest of the season. Once the cat is out of the bag in daily fantasy, everyone else can start him for the same price you'll have to pay. There's no discount for an early buy-in.

Because the risk is higher and the reward is lower, trying to identify sleepers makes much less sense in DFS than it does in traditional fantasy leagues. Let your opponents go on this snipe hunt, while you focus on rostering reliable value.

## 4.2. Player Salaries

By Jeff Pasquino

When it comes time to create your DFS lineup each week, one of the first considerations has to be player salaries. Football is unique in DFS in that there is typically a very long time (approximately a full week) that a given set of salaries is in effect, which can allow for a lot of values to emerge. Prices are set late Sunday on FanDuel for the following week, so a great deal can happen to affect projections before kickoff. Starting players can change, injuries can occur, and surprises on Sunday and Monday Night Football can all impact the value of a given player.

Moreover, how efficient (that is, accurate according to good projections) the overall pricing is in a given week can greatly impact how easy or difficult it is for a good DFS player to gain a positive expectation. If there are few bargains, the pricing model for a DFS site is considered “tight,” while if bargains are easy to come by, the pricing is considered “loose.” Good DFS players are happiest when the pricing is neither overly tight nor overly loose. If the pricing is too tight, there will be too few inefficiencies for good players to exploit. It doesn’t matter if I’m better than average at finding bargains if there just aren’t any to be found. Conversely, if the pricing is too loose, the bargains will be so obvious that even an unskilled player will fill his roster with them. Ideally, there will be inefficiencies to exploit, but they will be few enough or subtle enough that only experts—including readers of this book—will reliably identify them.



So how can you determine if a given week’s pricing is tight or loose? An experienced player can go by feel. If it’s particularly easy to construct a strong lineup because the best values stand out as being obvious, the pricing may be overly loose. If it’s especially difficult to fill out your lineup because there are a great number of players bunched closely together at the top of the value chart (where value = points per dollar), with few or none standing out from the rest, the pricing may be overly tight.

Without relying on feel, you can use the Footballguys’ Interactive Value Charts (see Section 4.7) as a guide. Sort by value (either by position or overall, either by points per dollar or H-value), and see whether the order of the list changes much depending on whose projections you are using. If all of the projectors agree on who the top values are, that indicates loose pricing. If the top values are significantly different based on which individual set of projections you are using, that indicates tight pricing.

If the pricing is particularly loose or particularly tight in a given week, you may consider investing a smaller percentage of your bankroll than normal in that week.

## **4.3. Heuristics**

*By David Dodds*

People who play daily fantasy games are all looking for that silver bullet, the magical formula combining all relevant criteria to output players who will win contests. I have spent countless hours combining multiple datasets (FanDuel pricing, my projections, Vegas lines, and actual performance) in hopes of finding a consistent approach to the selection of players. And I want to share my findings with you.

But before we jump deep into the data, I should explain some terms I will use often.

**Ratio** – Calculate Ratio by dividing projected points by salary (in thousands). For example, I might project Drew Brees to score 23.3 points when his salary is \$9,200. His ratio would then be  $23.3 / (9200 / 1000) = 2.53$ .

**Multiplier** – This calculation is the same as Ratio but uses actual fantasy points scored instead of projected points.

**H-Value** – Take projected points raised to the square root of three, divide by salary, and then multiply by 2,000. In the Drew Brees example above, his H-value would be 50.8.

**Point Spread or Line** – Both refer to a team's margin of defeat as projected by the Las Vegas sportsbooks.

**Over/Under** – This refers to the total points expected to be scored by both teams in a game (as established by the Vegas sportsbooks).

**Expected (Team) Points** – You can calculate each team's projected Vegas total using Point Spread and Over/Under. If New Orleans is favored by 3 points in a game with a 53 point Over/Under, their expected team total would be:  $(53 - 3) / 2 + 3 = 28$  points.

### **4.3.1. FanDuel Pricing Algorithm**

I don't know the exact formula FanDuel uses to create prices each week, but I do know it has little to do with the upcoming matchup. Their pricing strategy seems to factor in these two variables:

- Did the player improve upon his fantasy points per game since last week?
- Was the player highly owned this week?

With this kind of pricing model, there are significant price anomalies each week. Those become the value plays we project to have large Ratios and H-Values.

### **4.3.2. The Hypothesis**

If my projections are sound, I would expect that choosing players I have predicted to have high Ratios and H-Values would yield better than average results.

Let's tear into the data to see if my hypothesis holds true.



### **4.3.3. Quarterbacks**

Over the course of 17 weeks last season, FanDuel offered 1,281 quarterback choices. Of course, the majority of these were never going to play. Scott Tolzien, for example, was never a realistic option. Narrowing the field down to quarterbacks projected to score at least 10 fantasy points in a week yielded 502 options.

Choosing randomly from these 502 players would have produced ok results:

- Average cost = \$7,350
- Average production = 17.24 FP
- Multiplier = 2.35

As you can see, quarterbacks routinely hit twice their salary (as measured in thousands of dollars). This is an important measure because your salary cap is \$60,000, and scoring 120 points in a cash game will usually put you in the money. You're therefore looking for each player to score twice their salary.

We can do a lot better than random though, and the data helps point us towards a solution.

Category	Cost	FP	Entries	Multiplier
all	\$7,350	17.24	502	2.35
ratio= 2.35+	\$7,128	18.10	252	2.54
H-Value=37.4+	\$7,649	19.10	244	2.50
Exp Pts = 22.75+	\$7,812	19.07	245	2.44
home	\$7,330	17.82	250	2.43
favored	\$7,720	18.77	248	2.43
O/U	\$7,756	18.51	224	2.39
combos				
ratio, H	\$7,398	19.19	185	2.59
ratio, H, home	\$7,387	19.11	109	2.59
ratio, H, fav	\$7,655	19.69	110	2.57
ratio, H, Exp	\$7,650	20.18	125	2.64
ratio=2.45+, H, Exp	\$7,431	20.26	75	2.73
ratio=2.50+, H, Exp	\$7,265	20.45	57	2.81

By looking near the midpoint of a bunch of our variables, we see in the table that all of these factors improve our selection criteria: Ratio, H-Value, Expected Points, Home, Favored, and Over/Under.

These all make sense to me. Ratio and H-Value are the best indicators to show FanDuel price anomalies. Players that I have flagged as the most significantly underpriced correlate highly to outperforming a random player (where most are correctly priced). Home, Favored, high Over/Under games, and high Expected Team Points all will likely produce a greater number of outstanding performances, skewing the data upward as well.

Since Expected Points is a combination of both Point Spread and Over/Under, I was curious what the intersection of these midpoints of Ratio, H-Value, and Expected Points would look like.

From the table, that produced 125 choices with these results:

- Average Cost = \$7,650
- Average production = 20.18 FP
- Multiplier = 2.64

I was able to lower the average cost of the player while increasing fantasy production by tightening up the Ratio even further. At Ratio = 2.50+, H-Value = 37.4+, and Expected Points = 22.75+, the data summarized as follows:

- 57 choices for weeks 1-17
- Average cost = \$7,265
- Average production = 20.45 FP
- Multiplier = 2.81
- Dollars per point = \$355
- 45 of 57 hit 2x value (78.9%)
- 21 of 57 hit 3x value (36.8%)

#### **4.3.4. Running Backs**

Over the course of a 17-week regular season, FanDuel offered 2,331 running back choices. If a person threw darts at a board, they would have reached the cash-game goal of 2x just 12.6% of the time (293 times). We can do better than a random dart throw.

Considering only running backs projected to score at least eight fantasy points in a week yielded 587 options.

Choosing randomly from among these 587 players would have still produced sub-par results:

- Average Cost = \$6,696
- Average production = 11.13 FP
- Multiplier = 1.66

But we can do way better than random, and the data has the answers.



Category	Cost	FP	Entries	Multiplier
all	\$6,696	11.13	587	1.66
ratio= 1.79+	\$6,879	12.49	290	1.82
H-Value=21.9+	\$7,210	12.72	289	1.76
home	\$6,667	11.39	295	1.71
Exp Pts = 23+	\$6,710	11.38	294	1.70
favored	\$6,750	11.15	307	1.65
O/U	\$6,687	10.87	274	1.63
combos				
ratio, H	\$7,083	12.89	253	1.82
ratio, H, home	\$7,052	12.69	109	1.80
ratio, H, Exp	\$7,253	13.71	116	1.89
ratio=1.90+, H, Exp	\$7,178	13.97	89	1.95
ratio=1.95+, H, Exp	\$7,164	14.44	76	2.02

Again, the significant variables are Ratio and H-Value. Surprisingly, Over/Under and Favored categories actually led to *worse* datasets in 2015. The best dataset again comes from the intersection of Ratio, H-Value, and Expected Team Points. From the table, that combination of factors produced 116 choices with these results:

- Average Cost = \$7,253
- Average production = 13.71 FP
- Multiplier = 1.89

I was able to lower the average cost of the player while increasing fantasy production by tightening up the ratio even further. At ratio = 1.95+, H-Value = 21.9+, and Expected Points = 23.0+, the data summarized as follows:

- 76 choices for weeks 1-17
- Average cost = \$7,164
- Average production = 14.44 FP
- Multiplier = 2.02
- Dollars per point = \$496
- 33 of 76 hit 2x value (43.4%)
- 15 of 76 hit 3x value (19.7%)

### 4.3.5. Wide Receivers

Much like the running back position, if a DFS player were to randomly choose his wide receivers, he would be facing long odds at grabbing one that was valuable. FanDuel offered 3,221 receivers over the course of the regular season. These receivers cost an average of \$5,243 while yielding just 4.4 fantasy points.

Considering only wide receivers that were projected to score at least eight fantasy points in a week tightened the list to 763 options in that span. Choosing randomly from among these 763 players would have produced average results:

- Average Cost = \$6,777
- Average production = 11.60 FP
- Multiplier = 1.71

Guess what? We can do a lot better than random.

Category	Cost	FP	Entries	Multiplier
all	\$6,777	11.60	763	1.71
H-Value=20.5+	\$7,387	13.80	377	1.87
ratio= 1.72+	\$7,032	12.79	374	1.82
Exp Pts = 23.25+	\$6,902	12.27	369	1.78
favored	\$6,860	12.06	399	1.76
home	\$6,774	11.78	383	1.74
O/U	\$6,833	11.81	393	1.73
ratio, H	\$7,276	13.50	316	1.86
ratio, H, Exp	\$7,398	13.88	182	1.88
ratio, H-val=23+, Exp	\$7,605	14.53	151	1.91

Again, the significant variables are Ratio and H-Value. It's worth noting that the best data came from H-value. This makes sense as H-Value rewards higher priced options, and much of wide receivers' value comes from touchdowns.

The best dataset again comes from the intersection of Ratio, H-Value, and Expected Team Points. From the table, that criteria produced 182 choices with these results:

- Average Cost = \$7,398
- Average production = 13.88 FP
- Multiplier = 1.88

I was able to produce a more elite set of data by screening H-Value further to 23+. At Ratio = 1.72+, H-Value = 23+, and Expected Points = 23.25+, the data summarized as follows:

- 151 choices for weeks 1-17
- Average cost = \$7,605
- Average production = 14.53 FP
- Multiplier = 1.91
- Dollars per point = \$523
- 63 of 151 hit 2x value (41.7%)
- 22 of 151 hit 3x value (14.6%)

#### **4.3.6. Tight Ends**

Tight Ends are rough to roster. You have to choose one each week, and they're going to let you down a lot of the time. Except for a couple of elite tight ends, most of the players at this position will only achieve twice their value if they score a touchdown.

As with the other skill positions, if you were to choose a tight end randomly, you would be facing long odds of grabbing one that was valuable. FanDuel offered 1,691 choices during the 2015 regular season, and they cost an average of \$4,815 while yielding an average of just 2.9 fantasy points.

Considering only tight ends that were projected to score at least six fantasy points in a week yielded 338 options. Choosing randomly from among these 338 players would have produced average results:

- Average Cost = \$5,636
- Average production = 8.83 FP
- Multiplier = 1.57

And you guessed it. We can do a lot better than random.

Category	Cost	FP	Entries	Multiplier
all	\$5,636	8.83	338	1.57
H-Value=15.0+	\$6,063	10.32	169	1.70
ratio= 1.57+	\$5,996	10.15	175	1.69
Exp Pts = 23.25+	\$5,686	9.42	169	1.66
favored	\$5,715	9.89	176	1.73
home	\$5,628	9.67	166	1.72
O/U	\$5,701	9.00	164	1.58
combos				
ratio, H	\$6,060	10.25	164	1.69
Ratio, H, fav	\$6,266	10.88	82	1.74
ratio, H, Exp	\$6,251	10.98	74	1.76

The most significant variables for tight ends are shoe size and number of calories eaten three hours prior to game time. Just kidding. It's Ratio and H-Value again. It's worth noting that the best data came from H-value. This makes sense to me as H-Value rewards higher priced options, and like wide receivers, a lot of a tight end's value comes from scoring touchdowns.

The intersection of Ratio, H-Value, and Expected Team Points provides the best data set again.

From the table, that produced 74 choices with these results:

- 74 choices for weeks 1-17
- Average cost = \$6,251
- Average production = 10.98 FP
- Multiplier = 1.76
- Dollars per point = \$569
- 29 of 74 hit 2x value (39.2%)
- 10 of 74 hit 3x value (13.5%)

#### 4.3.7. Kickers

FanDuel continues to use the kicking position in their daily contests, so we are analyzing it here. Screening for kickers that I projected to score at least six fantasy points yielded 489 options.

Choosing randomly from among these 489 players would have produced average results:

- Average Cost = \$4,719
- Average production = 8.07 fantasy points
- Multiplier = 1.71

We can do a little better than random, even with kickers.

Category	Cost	FP	Entries	Multiplier
all	\$4,719	8.07	489	1.71
ratio= 1.76+	\$4,770	8.43	248	1.77
H-Value=16.5+	\$4,790	8.46	248	1.77
favored	\$4,776	8.29	245	1.74
Exp Pts = 22.75+	\$4,776	8.38	242	1.75
home	\$4,710	8.20	246	1.74
O/U = 45+	\$4,743	8.20	254	1.73
combos				
ratio, H	\$4,785	8.47	235	1.77
ratio, H, fav	\$4,809	8.47	180	1.76
ratio, H, Exp	\$4,797	8.47	192	1.77
ratio=1.9+, H, Exp	\$4,841	8.61	102	1.78

The best dataset again comes from the intersection of Ratio, H-Value, and Expected Team Points. Further tweaking the Ratio (Ratio = 1.9+) criteria yields slightly better data:

- 102 choices for weeks 1-17
- Average cost = \$4,841
- Average production = 8.61 FP
- Multiplier = 1.78
- Dollars per point = \$562
- 38 of 102 hit 2x value (37.3%)
- 12 of 102 hit 3x value (11.8%)

#### **4.3.8. Defenses**

As with kickers, many players stress over how to identify a top defense. And as with kickers, identifying top defenses is not as random as it seems.

In 2015, FanDuel gave players 505 options to choose during the regular season. Of those 505 team defense performances, only 112 scored twice their salary (the desired output for cash games), and just 46 reached three times (desired level in tournaments). A random selection yielded the following:

- Average Cost = \$4,390
- Average production = 6.8 fantasy points
- Multiplier = 1.55

And the table below contains data to help us outperform that multiplier.

Category	Cost	FP	Entries	Multiplier
all	\$4,500	7.46	502	1.66
ratio= 1.92+	\$4,614	8.36	249	1.81
H-Value=18.4+	\$4,651	8.41	248	1.81
favored	\$4,669	8.44	249	1.81
Exp Pts = 22.75+	\$4,633	8.22	245	1.77
home	\$4,494	7.51	251	1.67
O/U	\$4,462	7.14	260	1.60
combos				
ratio, H	\$4,643	8.46	236	1.82
ratio, H, fav	\$4,706	8.74	192	1.86
ratio, H, Exp	\$4,728	8.82	163	1.87
ratio=2.10+, H, Exp	\$4,748	9.47	99	1.99

The best dataset again comes from the intersection of Ratio, H-Value and Expected Team Points. Further tweaking the ratio (Ratio = 2.10+) criteria yields slightly better data:

- 99 choices for weeks 1-17
- Average cost = \$4,748
- Average production = 9.47 FP
- Multiplier = 1.99
- Dollars per point = \$562
- 39 of 99 hit 2x value (39.4%)
- 25 of 99 hit 3x value (25.3%)

#### ***4.3.9. Going Forward***

Although I looked backwards at 2015 data, one can easily apply this same criteria going forward.

For a position, simply perform these two steps:

1. From a reliable set of projections (I would suggest using mine), note the mean values of H-Value, Ratio, and Expected Team Points for all players with a minimum threshold of projected fantasy points (QB = 10, RB/WR = 8, TE/PK = 6).
2. Sort the list to include all values above the mean for all three of the key variables (H-Value, Ratio, and Expected Team Points).

This is now a solid list for you to dig deeper into the data. Home games are generally better than away games. Players generally score more fantasy points as favorites, at home, with high Expected Team Points. And higher Ratios and H-Values usually yield better results as well.

## **4.4. Roundtables**

### **4.4.1 Quarterbacks**

**John Lee:** Of all the skilled positions, the quarterback position is the one roster slot with which I am most selective. Why? Because, frankly, it is the single position that I believe is most predictable from week to week. Running backs will be substituted on third down plays, wide receivers can experience suboptimal matchups and be forced to share targets, and tight ends are all too often a crapshoot; but quarterbacks never split pass attempts with another quarterback, they can score fantasy points with their arms and their legs, and their involvement in the offense is quite predictable after analyzing Vegas' game script. So for a cash game, I want a quarterback who consistently averages 35 or more pass attempts per week, regardless of game script; those opportunities equate to fantasy output.



Choosing a GPP quarterback is a bit dicier, as it should be. When considering tournament quarterbacks, I am looking for one of several scenarios:

1. a quarterback who will be playing from behind for most of the game and will be forced to air it out to keep pace with the opposing offense
2. a quarterback who is going to be dramatically under-owned (< 5% ownership) due to recency bias or price, but has the ability to reach GPP value
3. a cheap backup quarterback who does not need to put up big numbers to achieve value
4. a quarterback facing a secondary that has not demonstrated an ability to slow down an opposing passing game
5. a savvy quarterback who will be asked to carry an additional load after a key member of the running game has been announced as inactive for that given week. In each of these cases, I am focusing on upside and emphasizing likely low ownership to increase the impact of a big performance on my overall standing in the GPP.

**Mark Wimer:** I first look at which quarterbacks get to face the worst pass defenses. If stud quarterbacks have drawn lame pass defenses, that vaults them to the top of my list. Then I consider cheaper quarterbacks who are less consistent but still have upside. I also consult Footballguys' projections by David Dodds, Maurile Tremblay, and Sigmund Bloom. And I dig into Bob Henry's Sleepers article and Matt Bitonti's Offensive Line Notes. If a quarterback's offensive line is falling apart due to injuries, he'll have pass protection issues, so I like to monitor the health of the big guys up front. Finally, I make sure there are no current injury worries with each quarterback's top three receivers.

**Jeff Pasquino:** There's no better place to find value on a points-per-dollar basis on FanDuel than at the quarterback position. Nominally, based on projections that we all use at Footballguys, the quarterback position projects to produce the most fantasy points per \$10K of any position. Each week about 10 quarterbacks are projected to score 23 fantasy points per \$10K, while elite RBs and WRs hover closer to 20. That means there is a great deal of incentive to "pay up" and buy an elite quarterback on FanDuel, just because you are going to get more bang for your buck at quarterback than at any other position.

As far as which quarterbacks to choose, I am all about using the Las Vegas totals (looking for the highest projected scoring games) and the weak matchups. If an elite quarterback is going to be in a contest that projects to have 48+ points scored that week, he makes my short list. I also consider how strong the run game is for that team, and if they have issues at the running back position. I want a team that almost has no choice but to throw. I want to find that 300+ yard passing quarterback who has a good shot at three touchdowns.

Another point that should not be overlooked is the quarterback with the ability to run, especially near the goal line. A rushing touchdown is worth two more points than a passing touchdown. While not the primary goal of QB selection, rushing ability breaks anything near a tie for me.



**Dan Hindery:** I approach both GPP and cash-game QB selection very similarly with only three real differences. First, I am more concerned with projected ownership totals in selecting a GPP quarterback. I am more likely to take a top QB with what is perceived to be a more difficult matchup in a GPP if I feel he will be less owned and there is a high ceiling for his production (even if there is a lower floor than normal). Second, I am more likely to work to find a slightly cheaper QB in a GPP than in a cash game. I usually will not be looking to save too much money at QB in any format, but I am more likely to work to find an \$8,000 option versus a \$9,500 option in a GPP than I am in a cash game due to a need for all of my positions to put up huge numbers in a GPP. Lastly, for ease of stacking in GPPs, I prefer a QB with one or two strong receivers versus a QB who spreads the ball around.

In terms of how I approach the QB position, three rules I like to follow are:

**1. Don't get too cute at QB.** While there will often be a temptation to try to use a cheap QB who has a nice matchup on paper, I will fight this urge and stick with proven commodities at the position even if I have to pay up for the privilege. No matter the format, the odds say it is generally worth spending more on QB and finding bargains at other positions. It is much easier to find lower-priced options at RB, WR and TE than at QB.

**2. Pay attention to CB injuries on the opposing defense.** It is hard enough under the NFL's current rules to cover wide receivers and slow down the top quarterbacks, but it becomes almost impossible when a defense has to rely on backup cornerbacks to get the job done. Everyone will be aware of quarterbacks facing weak pass defenses, but not everyone will spot the usually solid defense that will struggle due to injuries.

**3. Target QBs playing against another top QB.** While the strength of the opposing pass defense is obviously a factor, game script can often be determined not by the strength of the opposing defense, but by the strength of the opposing offense. Coaches will always be more conservative in their offensive play calling when facing a weak passing offense that is unlikely to score a lot of points. In addition, if your QB's team gets out to an early lead, the play calling will get even more conservative as the fear of a comeback is low against a weak QB. On the other hand, when matched up against a strong offense with an elite QB, the play calling is much more likely to be aggressive with the need to score a lot of points to have a chance to win.



**Jeff Pasquino:** There's something I wanted to add to this discussion, which is the debate over whether or not to take a cheap quarterback in a given week.

First, cheap starting quarterbacks don't come along too often. Usually it is a backup getting a surprise start, either due to injury or a benching of the normal starter. That leads to an opportunity to go cheap at quarterback, which affords you more salary budget to target higher-priced skill-position players. So the debate is this—do you take advantage of that cheap quarterback, or do you go with a higher-priced option that week?

For me, it comes down to a few simple questions. First, is this cheap option a rookie or a very inexperienced quarterback? If he is, I am done and not taking this cheap option. Far too often I have seen newer quarterbacks with the "deer in the headlights" look in their eyes in their first few starts, and the fantasy performances are typically train wrecks. If the backup that gets thrust into the starting role is a veteran, I am much more inclined to consider the cheap play.

**Austin Lee:** As others have mentioned, studying Vegas lines is a key part of the process for selecting any position, and quarterbacks have the most direct connection to how those game scripts play out.

When looking at quarterback matchups, I use my Normalized Strength of Schedule tool, available at Footballguys.com. Instead of looking at the raw data, I prefer to look at summary data that has already adjusted for the quality of opponents. With my tool, you can quickly see the percentages that defenses allow opponents to over-perform in opportunities, yardage, touchdowns, and total fantasy points.



I also love what Dan mentions about paying attention to the injuries in an opponent's secondary. That can lead to a fantasy explosion.

My approach for choosing passers for tournaments is significantly different from how I choose a quarterback for cash games. For tournaments, I almost exclusively think in terms of stacks and barely bother with ranking quarterbacks by themselves. There's no point in getting excited about a passer being a slight value if all of his pass-catchers are overpriced. If there's an extreme value, there can be exceptions. Another exception is if a quarterback is a really strong play without a good stack partner.

Keep in mind that FanDuel gives passers one point per 25 yards, not one point per 20 yards, like some other sites. They also only deduct one point per interception. This gives a slight bump to sloppy rushing quarterbacks compared to some other scoring systems.

#### **4.4.2. Running Backs**

**James Brimacombe:** One thing I am always looking for in choosing a running back is opportunity, i.e., the number of touches I believe he will receive. As the season goes on it is also good to look at matchups: which defenses give up the most rushing yards, touchdowns, and receiving yards to running backs? Also I think the PPR angle on FanDuel is often blown out of proportion with only 0.5 points per reception. Touchdowns are still king with the six, and trying to identify the running backs who are in the position to find the end zone is more important than looking at a running back who might catch four or five passes.

**Jeff Pasquino:** I also look for the best matchups. I want a good back going against a defense that is bad against the run. It's especially enticing when the running back's offense typically features a high run-pass ratio. In that situation, I see factors favoring both good production (higher ceiling) and a lot of volume in touches (high floor).

After that I look for cheap starters. If there is a change on the depth chart, sign me up for a backup with talent that gets thrust into a starting role, especially if the game script favors running the ball.

Expected game script is a big factor as well. If the running back's team is favored by Las Vegas, that usually indicates he will get plenty of carries throughout the game and help milk the clock in the final quarter.

Lastly, I often look to do a stack with my defense. If I think a team with a strong defense will pitch a shutout or dominate an opponent, their primary ball carrier will likely have a great day as well.

**Phil Alexander:** There are several factors I look at when selecting a running back:

**1. Scoring potential** - especially on FanDuel where you're not getting a full point per reception, touchdowns are critical. They're much tougher to predict than carries and yardage, but red zone and goal line carries are decent data points to draw conclusions from. Both can be found by using the Footballguys Data Dominator.



**2. Workload** - Obviously, the more opportunities the running back has to score fantasy points the better. Projecting opportunity isn't just a matter of looking back at past game logs. Snap counts (found on each team page on Footballguys) are important and so is the projected game script, which brings me to...

**3. Vegas lines** - Ideally, the running back's team will be a Vegas favorite (the heavier the better) with a high projected team point total. This implied game script not only suggests high touchdown potential, but also increased workload for the running back as his team attempts to run out the clock in the second half.

**4. Home/Road Splits** - I'm always willing to bump a running back playing at home, especially if they've shown drastic home/road splits in the past and/or the implied game script is at least neutral. I've had success picking contrarian running backs in GPPs prioritizing this factor over defensive matchup since the crowd is likely to fade even the best running backs if they're going up against a top defense.

**5. Opposing Defense** - The Footballguys Game Log Dominator is a great tool to see how defenses have fared against opposing running backs in their previous games and spot trends that can be exploited.

#### **4.4.3. Wide Receivers**

**Jeff Pasquino:** Changes on an NFL team's depth chart, whether due to injury or for other reasons, often lead to good values. If a team's running game is struggling, the wide receivers should get more targets as the team leans more on its passing game. This isn't always reflected in FanDuel's salaries. I also sometimes look for players who've been heavily targeted in recent weeks even if they failed to turn those targets into solid production. (Maybe he just missed on a long touchdown or had a big gain called back due to a penalty.) It may just be a matter of time before he gets on the same page with his quarterback.

On the other hand, I look to avoid matchups against shutdown corners. I also try to fade receivers with questionable quarterback situations.

**Justin Howe:** I'm looking for different characteristics depending on which salary tier a wide receiver falls into. Among the most expensive wide receivers, I want guys who produce consistently and don't have red flags (injury, cornerback matchup, game script, etc.) heading into the current week.



In the next tier down, I'm willing to consider players who may not be consistent every week, but they have upside in a productive passing offense. Maybe they are the WR2 or there are question marks about where they fall in the pecking order on their own team. But for the most part, this is a tier I avoid. I'd rather pay a little extra and get a clear WR1 or pay a little less and find better value.

The third tier consists of boring guys nobody wants. This is my favorite tier to draw from: receivers with little weekly hype or fanfare, but a track record of significant production. The wideouts in this tier may be older or perceived as injury-prone.

The fourth tier consists of lottery tickets—typically guys with high upsides but lower probabilities of achieving them. These guys are better suited for GPP lineups than for cash games.

**Phil Alexander:** Jeff and Justin have covered a lot of good ground. One thing Jeff touched on was individual WR-CB matchups, which I want to expand on a bit.

While most casual DFS players know a few cornerbacks by reputation and understand to avoid receivers they're matched up against, not nearly as many people are familiar with how lesser-known cornerbacks perform.

Spotting bad cornerbacks (and figuring out which wide receivers are likely to line up against them) does require a bit more homework on your part. There are more statistics to pour over, and admittedly a little guesswork involved with exactly how often a particular receiver will draw a specific corner in coverage. But there's an edge to be gained in DFS by understanding your wide receiver's opponent on a deeper level than just how many fantasy points the team defense allows versus the position.

**Mark Wimer:** The first factor I consider when looking at prospects for my DFS lineups is their matchup. When considering wide receivers, I want to select players on teams that face the worst pass defenses in the NFL. After determining which teams have drawn a soft matchup, I then take a look at the offensive tendencies of the various teams in question. Any circumstances which would tend to increase a team's reliance on passing will elevate their receivers' prospects in my book.

Next, I crosscheck my list of wide receiver prospects with David Dodds', Maurile Tremblay's and Sigmund Bloom's projections. If those three also really like one (or more) of the receivers on my

preliminary list over others there, I'll feature the receiver(s) that we've all converged on more prominently in my lineup combinations. I also look at Bob Henry's Sleepers article at Footballguys for the current week as he often highlights one or two players whom I skipped in my first step. It is always valuable to crosscheck your opinions against other analysts whom you respect.

Finally, I review the injury information for the teams and players on my list of prospects. Is a key pass-catching tight end or running back anticipated to be out for the current week? The absence of those other targets could result in more targets for the team's wide receivers. Detailed factors that impact wide receiver targets can be complicated but are well worth your time to evaluate.

#### **4.4.4. Tight Ends**

**Jeff Pasquino:** Tight ends are a tough position to select in general. Quite often, I am going to start with the top five to seven projected tight ends each week and just play the best value if I can afford him. If I can't afford a top-tier tight end, I look for a cheaper option with a favorable offensive scheme, game plan, and likely game script. While the top two or three tight ends each week are likely to be very expensive (and often deservedly so), finding that next tier performer who can give you a big game can provide two advantages—salary savings and uniqueness.

All of that said, I would not stray away from the top tier if I can afford one of them. Stud tight ends are expensive for a reason, as they usually produce consistently.



**Justin Howe:** Honestly, considering the state of the tight end position at the moment, I'm generally fine just sorting all playable tight ends by redzone-target share and going from there. After all, we're not necessarily gunning for 8-90-2 lines from our tight ends. In fact, in a GPP contest, we're only one snap away from reaching our TE benchmarks for the week—a TD here or a fluky 40-yard catch there, and we pretty confidently have a solid TE line.

For example, on a given week, I generally won't consider the highest-priced tight ends. I also won't consider anyone with low-to-zero red zone opportunity or usage lately, regardless of salary. With about 12-15 real options remaining, I'll compare red zone projections, team offensive performance, and scoring likelihood, and to a lesser extent, defensive matchups (LB, SS, and NB quality).

And guess what? Each week, I see four to six mid- and low-priced TE options with similar projections—or at least similar ceilings and floors—to top tier tight ends. So why would I pay a premium for a big name? I'll often just roster the guy with the best combination of team redzone potential and personal redzone share.

When playing a cash game, where predictability and consistency are so key, I'm a little more likely to spend on one of those top salaries. I don't do it as a rule, but I'm more open to the option of rostering a high-priced TE in cash games—provided he projects well, of course.



**Phil Alexander:** I focus on targets and touchdowns. Tight end is easily the most volatile of the skill positions—all but a select few see significantly less opportunity to score fantasy points than running backs and wide receivers. The best way to mitigate that volatility in cash games is to chase targets. Since touchdowns are difficult to predict, you'll want to look at red zone targets to gauge weekly touchdown upside—both the number of red zone targets the tight end usually receives, as well as the number of red zone attempts the opposing defense usually surrenders. Using the Footballguys Data Dominator to check targets from inside the 10-yard line helps too.

In cash games, I'm more likely to pay up for the more predictable positions that offer the highest floors (QB and RB) which means I rarely end up with a very expensive tight end (unless I can find enough value at the other positions to allow for it).

**John Mamula:** Over the past few seasons, the tight end position has been more difficult to predict compared to the other skill positions. This is due to the lack of consistency at the TE position. For FanDuel cash games, last season, sort of the opposite of Phil, I chose to pay up for reliable points and consistent production. In head-to-head cash games, consistent production will give you a significant advantage over opponents who try to save at the TE position.

**Dan Hindery:** While I agree with John on the benefits of rostering top tier tight ends in cash games, I don't usually roster the most expensive tight ends in GPPs. Their ownership rates tend to be too high.

In GPPs, my strategy is to target a TE with a price of \$6,000 or less (preferably as close to \$5,000 as possible) with a good matchup and a solid chance of scoring a touchdown. With the lower-priced options, it is much easier to hit the 3x multiple target range. For example, a \$5,000 TE needs to put together only a 5-65-1 line to score 15 points, which would be considered a strong return on investment for the TE position in a GPP. The highest-priced TEs usually need either multiple TDs or huge yardage totals (that are rare from the TE position) to provide the 2.5-3x return that you are looking for.

Another move worth considering in GPPs is stacking your QB with his primary TE regardless of whether you are also stacking one of the WRs. The path to a big GPP payday almost invariably requires a huge performance from your QB and a minimum of three passing TDs. If you assume then that your QB of choice will throw three or more TDs, then it's also a pretty good bet that your TE gets a solid slice of that production and has a strong chance of finding the end zone.

**Austin Lee:** With all this talk of red zone efficiency, which I agree is critical for tight ends, it would be worthwhile to consider Opportunity Adjusted TDs as a superior metric. Mike Clay of ESPN introduced it a few years ago, and it's fantastic.

It can be used to better predict TD-scoring regression and normalizes better than the arbitrary 20-yard cutoff for red zone data.

**Mark Wimer:** My first touchstone when creating a list of prospects at tight end is the weekly matchups. The next stop for me is reviewing Matt Bitonti's Offensive Line Notes. If there has been a rash of recent injuries along the offensive line, a tight end is often required to stay in and help the remixed offensive line pass-block for most of the subsequent game (or games, depending on how the new line configuration performs). Some tight ends are mostly pass-catchers, while others have a hybrid role, which means it pays to monitor the relative health and effectiveness of the offensive line that the tight end lines up next to from week to week.

I also consult Bob Henry's Sleeper article each week when winnowing my list of tight end prospects on any given week. Bob is an outstanding evaluator of fantasy production across all positions.

The next stop is David Dodd's, Maurile Tremblay's and Sigmund Bloom's projections. Where my list of best prospects converges with their opinions, I select those players to feature more prominently in my weekly DFS combinations.

**Austin Lee:** Mark, great point about offensive line injuries often reducing the number of passing routes run by blocking tight ends.



Similarly, tight ends will sometimes run fewer routes when playing against an opponent with a strong pass rush or if a healthy offensive line has been struggling the past couple of games. If a defense has weak deep coverage, the tight end might block more often to buy a quarterback time to exploit this weakness as part of a team's offensive game plan that week.

Sometimes you have to really dig deeply into the matchup to predict how often a blocking tight end will be used as a pass-catcher.

## **4.5. Projections**

By Maurile Tremblay

A few people reading this book will do their own projections each week. Most will not. This section is intended to set forth the basic method that we at Footballguys use to do projections for two reasons: (a) we hope it will give you confidence that we're considering the right sorts of inputs; and (b) if you decide to use our projections as a starting point but adjust them to put your own stamp on things, it will help you to know how our projections were generated (so that your variations from them can avoid accidentally double-counting certain factors, for example).



### **4.5.1. Using point spreads and over/unders**

In last season's Super Bowl, the Panthers were favored by 4.5 points, and the over/under was 45.5 points. This gives us an implied score of Panthers 25, Broncos 20.5. Obviously, that exact score is impossible, but you can think of it as the Panthers being about as likely to score more than 25 points as they are to score fewer than 25 points, and the Broncos being slightly more likely to score more than 20 points than they are to score fewer than 20 points.

How accurate is this estimate? Are better estimates possible? Since some sports bettors play with a positive expectation, it is possible to project NFL scores more accurately than the sportsbooks do. But it's not easy. It's pretty much a full-time job in itself. Rather than spending 40 hours a week trying to be 5% more accurate than sportsbooks at projecting NFL scores, we think it's better to spend five minutes looking up point spreads and over/unders from the books, freeing up more time for us to spend on individual player projections.



Using the point spreads and over/unders from the sportsbooks allows us to project the total number of points a team will score in its upcoming game, and also helps us project the number of offensive plays it will run, and its run-pass ratio. Projecting the total number of points a team will score

also greatly helps us in estimating the number of offensive touchdowns it will score, as well as the number of field goals and extra points it will get from its kicker.

#### **4.5.2. Projecting offensive plays and run-pass ratios**

Estimating the number of offensive plays a team will run in a given game is difficult. But it's important, because the more plays it runs, the more yards its players will accumulate, and projecting yards is essential to projecting fantasy points.

In general, the number of offensive plays a team runs is positively correlated with the number of points it is expected to score, and the margin of victory it is expected to win by. We can run a regression analysis to quantify the league-wide relationship between those variables and then use the point spread and over/under to project the expected number of offensive plays a team will run in its upcoming game—but that is actually not very helpful. The problem is that every team is quite different.

Let's go back to the Panthers in last year's Super Bowl—they were expected to score 25 points and win by 4.5 points. Based on league-wide averages, a team that is expected to score 25 points and win by 4.5 will run, on average, about 63 offensive plays. (For our purposes, a team's offensive plays consist of pass attempts plus rush attempts; they do not include sacks. Sacks would normally be considered offensive plays, of course, but for the narrow purpose of projecting individual offensive statistics, they are not part of our universe.)

In terms of offensive plays run per game, if we control for points scored and margin of victory, the Panthers are very slightly above average, and we can improve our projections if we take that into account. Rather than using league-wide numbers as the basis for our regression analysis, we can do better by evaluating each team's propensities individually.

I use 32 different formulas for the 32 different teams—partially based on a regression analysis using points and margin of victory, and partially based on some other factors. It would be pointless for me to list the 32 formulas right now, because they will change each week. Heading into Week 1 of the 2016 season, they will be based on stats from 2015. During the next four weeks of the 2016 season, they will be based on a combination of stats from 2015 and 2016. And after that, they will be based strictly on numbers from 2016. But I will be re-running and revising the formulas each week of the regular season, so any formulas I list here would be obsolete by Week 2.

And as with all of the projections I do that are based strictly on stats, the resulting numbers are a default starting place only. I will adjust them by hand if there are good reasons to. For example, teams like the Eagles, Browns, Titans, 49ers, and Dolphins, among others, may run substantially different offensive systems in 2016, and 2015 statistics from those teams may prove useless. So I may project the number of offensive plays and run-pass ratios for those teams somewhat from the gut, rather than using previous stats, for the first month of the 2016 NFL season.

While the average NFL team expected to score 25 points and win by 4.5 might run 63 offensive plays, my formula for the 2015 Panthers says they should be expected to run 64 offensive plays

under those circumstances, only a slight difference. With other teams, however, the difference could have been much more pronounced. If the 2015 Texans and 2015 Rams were each expected to score 25 points and win by 4.5, I would project those teams to run 69 offensive plays and 55 offensive plays, respectively—so there can be huge variance among different NFL teams even in similar game situations.

The same is true for run-pass ratios. All teams run more often in games that they win by a lot than in games that they lose by a lot. Margin of victory is positively correlated with run-pass ratio. But the relationship between those variables, as well as the baseline run-pass ratio, is different for each NFL team. Instead of using league-wide statistics to try to predict run-pass ratio based on projected margin of victory, I use 32 different formulas for the 32 different teams—and the formulas change each week based on the most recently available data.

Projecting number of offensive plays and run-pass ratio for each team in their upcoming games gives us the total number of rush attempts and the total number of pass attempts that they will be expected to perform. The next step is to distribute the team's rushes and targets to individual runners and receivers.

#### ***4.5.3. Estimating rushes and targets for each offensive player***

This is the most subjective part of my process of doing projections. There is no way to come up with automated default estimates for how the rushes and targets will be distributed to individual players on a given team in a given week. It must be done by hand.

For each team, I start by looking at the game logs for the season-to-date. Some patterns will appear obvious. It might be that the distribution of carries among RBs looks pretty much the same from week to week—meaning that there have been no injuries at the position so far, and no major changes in the depth chart or in the way that the individual players are used in the running game. That makes projections fairly easy—my projections for the current week can simply reflect the percentage of carries each running back has gotten so far on the season. Well, not so fast. I do have to check the news for that team first to see whether any injuries were suffered in the most recent game. But assuming there weren't any, distributing this week's rushing attempts to the individual running backs (and quarterbacks and wide receivers, to the extent applicable) will be fairly easy.

But it might be that the distribution of carries among running backs has not been similar each week so far. The featured back might have given way to an RBBC situation in recent weeks. Or one of the running backs may have been injured and another has received more carries in his place. In these situations, I try to figure out which previous weeks, if any, the current week will be most similar to—and I use those weeks as my guide. Sometimes, if a major injury just occurred at the end of the most recent game, there will be no previous week to serve as a reliable guide, and I'll have to wing it a bit based on my gut—and based on news reports, of course.

I distribute targets to receivers using the same process I use to distribute carries to runners. I look at game logs from previous weeks and look at news reports to try to figure out which previous weeks are most similar to the current week in terms of player usage. I figure out what share of the targets will go to which position, and to which individual players within each position, based on a subjective combination of previous patterns, trends, news reports, and so on. This is the part of doing projections that involves the most art and the least science, but it is also the single most important part of doing projections.

If you look at any number of reasonable sets of projections for a given team in a given week, they will probably be within 20% of each other—and often much closer than that—in terms of total offensive plays run, total offensive touchdowns, yards per carry for any given runner, yards per reception for any given receiver, and pretty much every other component of the projections except for the number of carries or the number of targets (or receptions) for a given player. It is quite common for projections from respected sources to differ by more than 20% in the number of carries that Frank Gore is expected to get, or the number of receptions that Jordan Matthews is expected to get, for example. Because the distribution of rushes and targets is the most variable aspect of decent projections, it is also primarily what separates very good projections from just so-so projections.

#### ***4.5.4. Estimating efficiency stats for individual players***

Efficiency stats are things like yards per rush, touchdowns per rush, completions per attempt, receptions per target, touchdowns per reception, etc. They are a measure of how effective a player is at accumulating fantasy points given the number of opportunities he gets.

Because different projections for LeSean McCoy's yards per carry will not vary nearly as much as projections for the number of carries he'll get, the former are not as important as the latter—but they are still important. If McCoy is expected to carry the ball 20 times, the difference between projecting 4.4 yards per carry and 3.9 yards per carry is a full fantasy point, which is often a large enough difference to affect whether he's in your lineup or not. So it's important to be as accurate as possible.

I project all efficiency stats for each player using Bayesian inference analysis. That's a slightly fancy way of saying that I take into account their efficiency so far in their careers, especially in the current season, and regress it toward the NFL mean depending on how extremely it has diverged from the mean so far, and on the number of opportunities the player has had so far.

If a player has averaged 5.0 yards per carry on 200 attempts, that is much more impressive than averaging 5.0 yards per carry on 20 attempts. The first guy, I might project to rush for 4.6 yards per carry against an average defense next week, while the second I might project to rush for 4.2 yards per carry. They have both likely outperformed their true long-term average in their limited number of carries so far, but the first guy gets a much greater benefit of the doubt because he's been doing it longer.

I will not go into the details of Bayes' Theorem but in very broad terms, each player begins the season with an expected yards-per-carry based on his career to date. This expectation is updated each week based on the results from the most recent game in a way that appropriately takes into account the current season's stats, the distribution of long-term YPC stats of players at his position generally, and the standard deviation in yards per carry generally.

I do the same with all efficiency stats that are components of a player's fantasy projections: completion percentage, yards per completion, touchdowns per completion, interceptions per pass attempt, yards per rush, touchdowns per rush, receptions per target, yards per reception, and touchdowns per reception.

I do this each week for each efficiency stat for each player individually—but it takes only a few seconds because it's all automated. Thank goodness for computers.

#### ***4.5.5. Considering strength of opponent***

The efficiency stats I get from applying Bayes' Theorem are generic stats against an average opponent. But LeSean McCoy will not face an average opponent this week: He will face a specific opponent that allows a specific number of yards per carry above or below the league average. Any decent set of projections must take this into account. If the Broncos are giving up nearly a full yard less per rush than the NFL average—as they did in 2015—our projection for LeSean McCoy against the Broncos' defense must be adjusted downward. But as with offensive efficiency stats, a team's defensive efficiency stats must be appropriately regressed to the NFL mean as well. If the Broncos have given up 3.2 yards per carry over their first 10 games, that doesn't mean they are likely to give up only 3.2 yards per carry indefinitely. It's more likely that they've been performing better than their own long-term average than it is that they've been performing worse than their own long-term average—meaning that their projected long-term average will be a bit above 3.2 yards per carry. (It will be very much above 3.2 yards per carry if they've been doing it for only three games instead of 10.)

Using the same process of Bayesian updating for team defenses that I used for individual offensive players, I derive strength-of-defense numbers (separately for rushing and passing) that I'll use to adjust projections for the offensive players facing them.

#### ***4.5.6. Distributing touchdowns***

Distributing touchdowns among offensive players is a multi-step process. First, using the projected number of team points from the point spread and over/under, we must divide those points into (a) offensive touchdowns, (b) field goals and extra points by the kicker, and (c) return touchdowns by the defense and special teams. The process I use is to first subtract out the expected points from return touchdowns (usually just under two points per game, though it varies a bit based on team, weather, etc.), and then subtract out the points expected from the kicker (usually about 35% of the remaining points, though it varies a bit based on team, weather, etc.). What's left is points expected from offensive touchdowns.

That's a top-down projection based on info from sportsbooks. I've also got a bottom-up projection based on my individual projections. If, for each player, I multiply his expected rushes and his expected receptions by his expected touchdowns-per-rush and touchdowns-per-reception, respectively, and sum the results, that's another way of projecting total offensive touchdowns by the team.

I place more stock in the first (top-down) projection than in the second (bottom-up) projection in this case. So if I'm projecting 2.3 touchdowns based on the first method, and 2.1 touchdowns based on the second method, I will multiply each player's touchdown-based efficiency stats by 2.3/2.1 so that they total 2.3 touchdowns.

#### ***4.5.7. Aligning passing and receiving stats***

My quarterback projections are based on the number of pass attempts the quarterback is likely to throw, multiplied by his per-attempt efficiency stats. My receiving stats for running backs, wide receivers and tight ends are based on the number of targets each player is likely to receive multiplied by his per-target efficiency stats.

What if the passing projections and receiving projections add up to different numbers? If a quarterback is expected to complete 25 of 39 pass attempts for 263 yards and 1.7 touchdowns, but his receivers as a group are projected to catch 24 of 39 pass attempts for 251 yards and 1.6 touchdowns, then something isn't quite right. In this situation, I adjust the quarterback's projections in each category (completion percentage, yards per completion, touchdowns per completion) and the receivers' projections in each category (receptions per target, yards per reception, touchdowns per reception) so that, when summed by weight, they meet halfway in the middle.

This means that when a backup quarterback is projected to start, and he is less efficient than the starter, the receivers' numbers will be reduced. Likewise, when a starting wide receiver is out and a lesser backup takes his place, the quarterback's numbers will be adjusted downward as well. This is as it should be.

#### ***4.5.8. Putting it all together***

Once I've gone through each of the steps outlined here, I've got projections. I've got projections in each statistical category for each offensive player (and for kickers, too), and those projections can be converted into projected points in a given DFS host site's scoring system.

The last step is to order the players at each position based on their fantasy points and make sure the rankings make sense. When I am projecting LeSean McCoy's fantasy points, the process does not involve Mark Ingram's fantasy prospects at all, or vice versa. If I've done a good enough job of each player's projections individually, the resulting list of rankings for the week should be sensible, and should largely accord with my gut feelings.

But sometimes they don't. Sometimes I get finished with my projections, look at the resulting list of rankings, and wonder how Ingram can be ranked ahead of McCoy. It forces me to retrace my steps and look for an assumption that should be reconsidered. Sometimes the process of retracing my steps leads me to confirm that my projections, on further reflection, make decent sense even though my initial gut reaction disagreed. But sometimes it leads me to change some of my assumptions, recalculate things, and generate a new set of rankings that isn't so loopy.

This process is iterated all week, as I continue to make adjustments up through Sunday morning.

*At Footballguys, we take the accuracy of our projections very seriously. I spend between 15 and 20 hours a week modeling the numbers that we use at Footballguys. My process differs slightly from Maurile's on the front end (to create game scripts), but is nearly identical on the back end. There are no shortcuts. It takes great projections to do everything well in fantasy football (including beating the daily games). —David Dodds*

## **4.6. H-Value**

By Dan Hindery

H-Value is a measure of how much value a player contributes to his DFS roster based on his salary and projected points. It was developed collaboratively by the Footballguys staff, and is built into the Interactive Daily Charts available each week at Footballguys.com.

### **4.6.1. Why is H-Value better than traditional value measures?**

Even a DFS novice will immediately realize that players projected to score a lot of points make decent DFS options. Points are good, and more points are better. That same novice will quickly learn, however, that he cannot fill his DFS roster with the players projected to score the most points at each position. The highest-scoring players are also usually among the most expensive players, and FanDuel's \$60,000 salary cap is a significant constraint.

Just as more points are better than fewer points, a lower salary is better than a higher salary. To account for both points and salary using a single metric, many DFS players divide points by salary to calculate the most common measure of value: points per dollar.

The benefit of using points per dollar as a measure of value is that it's very simple to calculate. The drawback, however, is that it skews too heavily towards the least expensive options. Why is this? Every week there will be players near the minimum salary of \$4,500 who will be projected to score 10 or more points. Meanwhile, players with salaries near \$9,000 will very rarely be projected to score 20 or more points. In terms of points per dollar, the less expensive players have a clear advantage. A list of the top FanDuel plays of the week based on traditional value measures will consist largely of players priced under \$6,000, which is not very helpful in assembling a lineup that maximizes total points.

To use an analogy, imagine that you are a C student in biology. What is more likely to help you earn a higher grade: an A on a quiz that accounts for 10% of your final grade or a B+ on the final exam that accounts for 40% of your final grade? If you assume that the rest of your grades are near average, then the B+ on the final exam will actually lead to a higher overall grade than the A on the quiz. Similarly, a high-priced player with a high multiple of points per dollar will be more helpful to your chances of winning than a lower-priced player with the same multiple.

### **4.6.2. How is H-Value calculated?**

H-Value is equal to projected points raised to the square root of three, divided by salary and then multiplied by 2,000.

It sounds a bit fancier than it really is, but we collaborated and experimented to come up with a formula we felt best identified the most valuable players and best options each week. The idea

behind the calculation is that points per dollar puts a little too much emphasis on the “per dollar” part and not enough on the “points” part. So we tried squaring points, which was better, but put a little too much emphasis on points. Raising to a power of 3/2 went a bit too far back in the other direction. Through a process of trial and error, we figured out that raising to a power of around 1.7 to 1.75 gave the most accurate rankings. The square root of three (~1.73) is in the right range and seems more elegant than just saying “1.73,” so that’s the formula. After dividing by salary, we can multiply or divide by any constant we want, and the values will stay proportional to one another. So we multiply by 2,000 just to get numbers that are easier to read—e.g., 24.3 rather than 0.01215.

The formula works well and gives DFS players a great idea of which players are most likely to be strong plays in a given week. Simply sorting the Footballguys projections by H-Value for quarterbacks, for example, and looking at the top five players provides a great list for the focus of your weekly research before choosing a few of them to feature in your lineups.

A real example picked at random from the 2014 season illustrates the strength of H-Value as a way to rank the overall top plays at each position. Let’s look at the projections going into Week 13 of the season and the top five QBs as ranked by the two most common measures:

Rank	Points	Points per dollar
1	Andrew Luck	Ryan Fitzpatrick
2	Aaron Rodgers	Geno Smith
3	Peyton Manning	Drew Stanton
4	Ben Roethlisberger	Ben Roethlisberger
5	Tom Brady	Blake Bortles

The top five QBs ranked by projected points yielded five high-priced players with an average salary of \$9,620. That’s a lot to pay for a quarterback, and not all of those guys were good values. Meanwhile, the top five QBs based on points per dollar yielded a group of very low-priced options with an average price of \$6,200. This list, however, was mostly filled with bargain-basement QBs who weren’t projected to score many points. A roster full of such players would be feeble. Neither of these measures used alone gave a very good idea of the top DFS options. Let’s look at the Week 13 top 5 QBs ranked by H-Value:

Player	H-Value Rank	Points Rank	Value Rank	Final Scoring Line
Ben Roethlisberger	1	4	4	435 Pass Yards, 2 Pass TDs
Andrew Luck	2	1	10	370 Pass Yards, 5 Pass TDs
Ryan Fitzpatrick	3	23	1	358 Pass Yds, 6 Pass TDs
Drew Stanton	4	11	3	294 Pass Yds, 1 Pass TD
Aaron Rodgers	5	2	14	368 Pass Yds, 2 Pass TDs

If you looked only at the highest-projected list, you'd have missed out on Ryan Fitzpatrick, who was the #1 fantasy QB that week. If you'd looked only at the best-value list, you'd have missed out on Andrew Luck, who was the #2 fantasy QB that week. H-value recognizes the merits of both lists, and combines them in a way that takes both points and value into account. In the above example, Ben Roethlisberger was the only quarterback to appear on both lists, and he was the #1 player as ranked by H-value. (He also led the NFL in passing yards that week.)

#### **4.6.3. How should H-Value be used?**

Everyone uses the Footballguys staff projections a little differently and adds their own research to the overall puzzle of choosing a lineup. One great way to leverage the fantastic projections of David Dodds, Maurile Tremblay, and Sigmund Bloom is to use them as a tool to greatly limit the potential player pool each week. This smaller player pool provides an efficient starting point for weekly research.

Most DFS players simply don't have the time to conduct exhaustive research of every matchup for every player and every team. But if you can quickly determine the 20 to 25 best plays each week by looking at the list of players with the highest H-values, it is much easier to research just those players' specific matchups in more depth. Further research allows you to narrow down your list to five or ten players who will constitute your top plays of the week. Those players become the primary building blocks for constructing weekly cash-game and tournament lineups.

The top of the H-value rankings also gives fantasy owners a good idea of what price range the real value plays will lie in that week. Some weeks, the value will be on the extreme ends of the spectrum, with some high-priced players expected to post huge fantasy numbers and a smattering of low-priced players providing enough value to successfully fill out the rest of the roster. Other weeks, a more balanced approach will be ideal if the leaders in H-value are players closer to the middle of the price range, providing both great value and high projected point totals.

## **4.7. Using the Interactive Value Charts**

By Maurile Tremblay

Interactive Value Charts are published each week during the NFL season at Footballguys.com.

As we covered in Section 2, DFS contests can be loosely divided into cash games and tournaments. Cash games comprise contests in which roughly half of the field finishes in the money. Tournaments comprise contests in which a much smaller percentage of the field—generally between 10% and 20%—finish in the money.

Any lineup is capable of scoring a wide range of points. The top end of that range is often referred to as the ceiling, while the bottom end is referred to as the floor. Your primary concerns in putting together a tournament lineup or a cash-game lineup are:

- (a) to select players who present great value as measured by expected points per dollar; and
- (b) to spend most or all of the salary cap.

Follow those rules, and your team will be expected to score a lot of points, which is how you win both cash games and tournaments.

There are some differences between lineups best suited for cash games and those best suited for tournaments, however. As was discussed in detail in Section 3, the basic idea is that in cash games you are more concerned with achieving a high floor, while in tournaments you are more concerned with achieving a high ceiling.

In general, a lineup expected to score significantly more points than a competing lineup will have both the higher floor and the higher ceiling, so putting together a lineup with an above-average expected score is the first order of business in either type of contest.

We will want to concentrate on value rather than raw points, so the first step is to click on “Value” (or “H-Value”—see the immediately preceding section) from among the options above the chart in blue. Then we’ll sort the player pool from highest value to lowest using whichever set of projections you prefer. To do so, click on the appropriate initials in the table header. (MT = Maurile Tremblay; DD = David Dodds; SB = Sigmund Bloom.)

Click on the various positional tabs and look for players near the top of the list who stand out as having large salaries. Those are the players we’re most interested in because they’ll help us achieve both of our goals at once—finding great values and using up our cap space.

Strategy Guide:		General		Cash Games				Tournaments				Top 20 Stacks			
All	Sun-Mon	Sun-only		Sun 1 pm			Sun 4 pm			Late		Primetime			
				Points		Value						H-Value			
All	QB		RB		WR			TE		K		D			
NAME	POS	GAME	SALARY	MT	DD	SB	AVG	MT	DD	SB	Avg				
Julius Thomas	o TE	DEN@SD	6300	13.5	14.3	18.0	15.1	46.1	43.9	40.0	43.4				
Antonio Gates	o TE	DEN@SD	5500	22.1	18.3	22.8	21.0								
Delanie Walker	o TE	NYJ@TEN	5300	20.4	18.6	22.2	20.4								
Kyle Rudolph	o TE	MIN@DET	5100	7.3	10.3	6.8	8.0								
Tony Moeaki	o TE	SF@SEA	4900	2.9	3.9	6.2	4.3								
Eric Ebron	o TE	MIN@DET	4900	5.5	5.1	7.3	6.0								
Rhett Ellison	o TE	MIN@DET	4800	1.9	1.8	0.0	0.9								
Vernon Davis	o TE	SF@SEA	4800	6.3	8.8	5.4	6.8								
Jacob Tamme	o TE	DEN@SD	4600	1.4	1.6	0.0	0.8								
Zach Sudfeld	o TE	NYJ@TEN	4500	0.1	0.0	0.0	0.0								
David Johnson	o TE	DEN@SD	4500	0.1	0.0	0.0	0.0								
John Phillips	o TE	DEN@SD	4500	1.1	0.0	0.0	0.2								
Luke Willson	o TE	SF@SEA	4500	3.9	3.9	4.3	4.1								
Jace Amaro	o TE	NYJ@TEN	4500	4.9	5.1	0.0	2.5								
Jeff Cumberland	o TE	NYJ@TEN	4500	2.5	3.3	0.0	1.5								
Chase Coffman	o TE	NYJ@TEN	4500	0.1	0.0	0.0	0.0								
Bryndon Parker	o TE	MIN@DET	4500	1.2	2.2	0.0	0.4								

Once you've inserted a few such players into your lineup, let the app fill in the remaining spots. Its suggestions will maximize total expected points, but at times you won't be happy with its choices for whatever reason. Remove any players you're not comfortable with, exclude them from consideration (by clicking on the green "o" next to their names in the player pool), and let the app do its thing again. Repeat until you're happy with the results.

If you are entering multiple contests, you will likely want to diversify your lineups rather than choosing the same players over and over again. The multiple sets of projections we offer at Footballguys come in handy here. You may, for example, want to choose some running backs based on my projections, choose a quarterback based on David Dodds' projections, and then fill in the remaining spots using Sigmund Bloom's projections.

To find a second lineup with different players, select a quarterback using Sigmund's projections, some wide receivers using the average projections, then fill in the remaining spots using David's projections. For your next lineup, try a different combination.

## **5. Money Talk**



## **5.1. Site Commissions (aka Rake)**

By Dan Hindery

The standard commission at FanDuel is 10% for Head-To-Head contests with entry fees of \$50 or lower. For example, in a \$50 Head-To-Head matchup, the winner receives \$90 with a commission of \$10 (10%). As entry fees increase, FanDuel reduces the percentage of the commission. For example, in a \$109 Head-To-Head or 50/50 contest, the winner receives \$200 and the commission is \$18 (8.3%). A \$270 Head-To-Head pays out \$500 with a commission of \$40 (7.4%). At the \$1,065 entry level, the commission decreases to 6.1%, and at the \$5,300 entry fee level, the commission is only 5.7%.



The standard commission at FanDuel for large guaranteed 50/50 contests with entry fees of \$25 or less is 12.0%. A \$10 entry fee 50/50 with 2,840 entries pays out \$25,000 with a commission of \$3,400 (12.0%). Unguaranteed 50/50 contests on FanDuel have the same payout structure as Head-To-Head contests with the standard rate of 10% commission on smaller entry fee contests and decreasing percentages as the entry fee rises.

The commission in guaranteed prize pool contests on FanDuel also decreases as the entry fee increases. The standard commission on GPPs with entry fees of \$25 or less is 13.0%. For example, a \$25 entry fee contest with 12,643 entries pays out \$275,000 with a commission of \$41,075 (13.0%). In a GPP with an entry fee of \$200 with 694 entries and a payout of \$125,000, the commission decreases to 9.9%. Of course, if these GPP contests do not reach the maximum number of entries, the result is a lower commission. If few enough enter, overlays are possible (which is essentially a negative commission).

## 5.2. Overlays

By Justin Bonnema

An overlay, as it pertains to DFS, occurs when a site hosts a contest with a guaranteed prize pool (GPP) but fails to fill that contest with enough entrants to cover its cost. For example, if a tournament has a buy-in of \$5 and guarantees a payout of \$5,000, it needs at least 1,000 entries to break even. If the site falls short of that expectation, the contest results in an overlay. As players, we want to target these situations since, with an overlay, even a merely average player will have a positive expectation.

How, when, and where to find these opportunities is a matter of contest scouting. Contest scouting, when part of your Sunday morning routine, can easily generate low-risk investments. The process is simple: Go to the FanDuel lobby, select Tournaments, and sort them by the number of entries. When you identify contests with low entry numbers relative to allowed entries (shown as 1290/3500, for example), open them as separate tabs in your browser and program your lineup as a temporary placeholder.

The best time to begin this process is about 30 minutes to an hour before rosters lock. By this point most injury situations are cleared up—or become as clear as they’re going to get—and it is unlikely any major news is going to disrupt the rosters we’ve spent hours building.

Commitment is a key ingredient. Know your lineups before even beginning your scouting process. The last thing you want is to still be flopping between players and miss an opportunity. Have your lineups ready to fire, so if you see an under-filled contest with a guaranteed prize pool, you can quickly select the players you want and submit your lineup before rosters lock.

Patience is important. It’s easy to get carried away hunting overlays and mistakenly enter a bunch of lineups over a few contests only to see those contests fill up at the last minute. You want to wait as long as possible before submitting. You also need to show discipline. Don’t get suckered into overcommitting your bankroll just because you found a bunch of tournaments that are “only” 80% full.

If you’re diligent and disciplined, contest-scouting minutes before the closing bell provides an easy path to positive expected value.

*Beyond banking on a contest overlaying with time left on the clock, it’s worth noting that we shouldn’t be entering contests just because there is overlay. Sure, having better odds is nice, but you won’t win without a good lineup. This is more important to remember in lineups that fully lock when the first game starts (like FanDuel contests), but it’s just general good practice—don’t enter contests just for the sake of entering them. —Alessandro Miglio*

### **5.3. Bankroll management**

By Maurile Tremblay

Bankroll management will mean different things to different types of players.

Many players play fantasy sports, including DFS, only as a hobby. Ideally, they bet only what they can afford to spend on entertainment—just as someone who skis for a hobby will spend only what she can afford on lift tickets—and any winnings will just be a happy bonus.

Some players play DFS for a living. For them, bankroll management is of utmost importance. They must bet an amount each week that takes into account their expected return (the more of their bankroll they bet each week, the more money they can make), but is appropriately balanced against their risk of ruin (the more of their bankroll they bet each week, the more likely they are to go broke). For full-time professionals, winnings are not merely a bonus. They are rent, car insurance, and food. A professional will need to take a generally-somewhat-fixed amount out of his bankroll each month in order to meet living expenses.

A player's bankroll is not simply what he has currently on deposit in his DFS accounts. For either the hobbyist or the professional, we'll define his bankroll as the amount of money he has set aside to wager in DFS contests, such that if he lost that amount, he'd be unable to place any more bets until he finds an outside source of additional cash—a paycheck from another job, a loan or funding arrangement with a backer, etc.



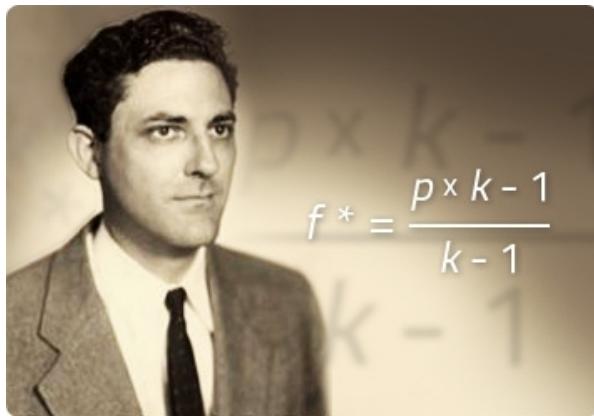
Now that we've defined *bankroll*, we need to define *risk of ruin*. It's what it sounds like—it's the chance that a player will go broke over a given number of bets.

Sound bankroll management means increasing our bankroll by the greatest amount possible over the long run. This necessarily means taking our risk of ruin into account, and here's why.

Suppose we have \$100 to wager on a coin flip. Heads, we double our amount wagered; tails, we lose our amount wagered. How do we maximize our expected return if the coin is fair? We can't. Whether we bet 0%, 32%, 71%, 100%, or any other percentage of our bankroll, our expected return will always be zero dollars, because the amount we win when victorious is exactly equal to the amount we lose when defeated, and we'll win half the time.

But now suppose that it's a weighted coin that comes up heads 60% of the time. Now how do we maximize our expected return, measured in dollars, on a given bet? It should be obvious that the answer is by betting 100% of our bankroll. When we bet \$100, we expect to win \$20 on

average. (Suppose we play five times, winning \$100 three times and losing \$100 twice, for a net gain of \$100. A gain of \$100 over five flips is \$20 per flip.) Any other amount will produce a lesser return: if we bet \$50, for example, we will win only \$10 on average.



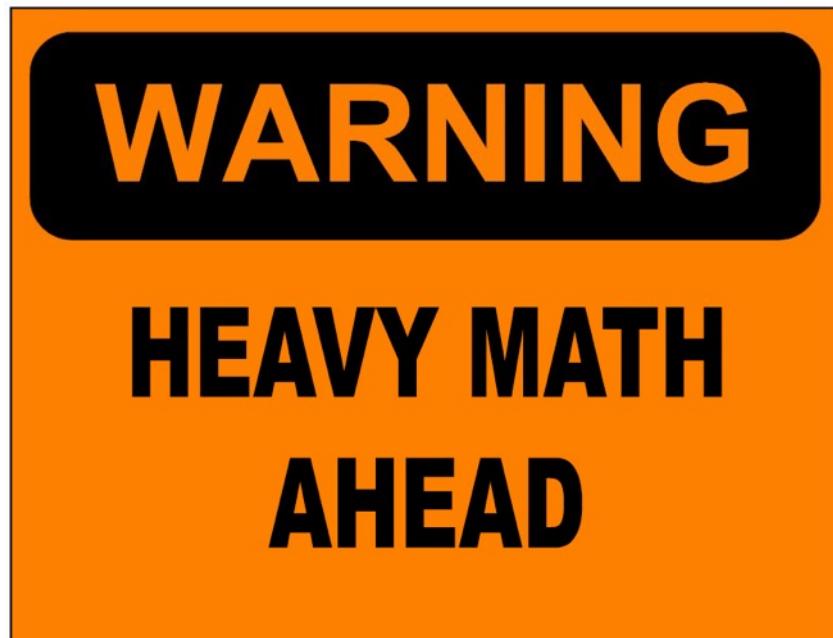
If we are allowed to play any game only a single time, and if we have a positive expectation in that game, we maximize our expected return by betting 100% of our bankroll.

But now suppose that we are allowed to play the game more than once. Suppose we are allowed to play as many times as we want unless and until we go broke. Do we still maximize our expected return by betting 100% of our bankroll?

No, we don't. If we bet 100% of our bankroll on the first trial, there's a 40% chance that we'll go broke. Then we'll have to sit on the sidelines for the rest of our lives winning \$0 while we watch our friends continue to make money in this positive-expectation game. Going broke is terrible because it deprives us of the opportunity to keep wagering, and to keep making money (on average).

That's why we have to balance two competing interests: we want to maximize our expected return in a given trial, but we also want to minimize our risk of ruin. We can't do both at once, it turns out, so we need to find an appropriate compromise.

This is where the Kelly Criterion comes in.



According to the Kelly Criterion, the percentage of our bankroll that we should bet in a given contest is equal to  $(bp - q)/b$ , where  $b$  is the net odds we are being offered (e.g., 1-1 in an even-money contest, or 2-1 in a fair-odds game that we will win only 33% of the time),  $p$  is the probability of winning, and  $q$  is the probability of losing. (Since we ignore pushes,  $q = 1 - p$ .)

For these purposes, odds are reduced to a value such that odds of X-Y, often written X:Y, have a value of X/Y. So odds of 1-1 have a value of 1, odds of 2-1 have a value of 2, odds of 3-2 have a value of 1.5, odds of 2-3 have a value of 0.667, and so on. Note that when the first number is greater than the second (e.g., 3-2), we are talking about an underdog. When the first number is smaller than the second (e.g., 2-3), we are talking about a favorite—i.e., an event that is more than 50% likely.

The Kelly Criterion originally comes from the world of finance, but it is just as useful in any type of wagering situation. Betting using the Kelly Criterion maximizes our median bankroll over the long run.

Let's return to the example above, where we have \$100 to start with and can bet as many times as we want (until we go broke) on a coin flip that will land on heads 60% of the time. It turns out that we will maximize our long-run rate of return by always betting 20% of our current bankroll. (See Kelly Criterion formula above.) So our first bet will be just \$20, well short of the \$100 we'd bet if we were trying to maximize our return on only a single wager.

This is a special case of the Kelly Criterion: in any game that pays even odds, the percentage of your bankroll that you wager should be equal to your advantage in the game. When we win 60% of the time and lose 40% of the time, we have an advantage of 20%, and should therefore bet 20% of our bankroll on each trial.

$$(1 * 0.6 - 0.4) / 1 = 0.2$$

If the game changes such that heads occurs only 55% of the time, we should bet 10% of our bankroll on each trial.

$$(1 * 0.55 - 0.45) / 1 = 0.1$$

If heads occurs 51.5% of the time, we should bet 3% of our bankroll on each trial.

$$(1 * 0.515 - 0.485) / 1 = 0.03$$

And here we have our first application to DFS—specifically to Double Up contests. In a Double Up, the game pays even odds. Whatever your entry fee is, that's how much you win on net when victorious, and it's also how much you lose when defeated. So if you know what percentage of the time you expect to finish in the money in a Double Up, you also know what percentage of your bankroll you should bet on each independent contest. Just double the amount by which it's over 50%.

Notice that I said in each *independent* contest. Different DFS contests are not always independent of each other. To take an extreme example, suppose you enter the same lineup in 20 different large Double Ups in some particular week. Suppose you believe, based on your track record, that you have a 54% chance of finishing in the money in each contest, apparently justifying an investment of 8% of your bankroll in a given contest.

$$(1 * 0.54 - 0.46) / 1 = 0.08$$

If the contests were independent of each other, you'd expect to win around 11 of them in a typical week. But in fact, in this example, you are usually going to win either 20 of them or 0 of them. You will hardly ever win anything like 11 of them. If your lineup is awesome in the first contest, it will be awesome in the others as well—*because it's the same lineup*. Therefore, you do not want to enter 8% of your bankroll on each individual contest; rather, you want to enter 8% of your bankroll total in all such contests.

If multiple even-money contests with 54% success rates are truly independent of each other (say, you are entering two contests—one for 1 p.m. games only and another for 4 p.m. games only) then you can spend 8% of your bankroll on each of them, for 16% total. But the more that the two rosters overlap with each other, the more you'll have to drop down from 16% total toward 8% total. By the same token, the less the two rosters overlap, the more you'll be able to move up from 8% total toward 16% total.

Also be sure to keep in mind the direct correlation between skill level and price of contest. Contests with higher entry fees and bigger prize pools attract stiffer competition. This is why bankroll management and game selection go hand-in-hand. You not only want to play contests that match your bankroll requirements, but you also want to maximize your chances of winning by playing contests aligning with your skill level. There is no shame in playing 20 \$1 contests instead of one \$20 contest. Ego hurts too many players' ROI. Consistently finding success is not a sprint, but rather a marathon. The easiest way to win \$10,000 is to first win \$1,000.

Moving on to other contests besides Double Ups...

Suppose we play a 50/50. It's easier to finish in the money in a 50/50 than in a Double Up, but we don't get paid as much when we do. In a standard 50/50 where we wager \$10 to win \$8, suppose we can expect to win 60% of the time (compared to 54% in a Double Up—giving us a 20% advantage over the average player in each case). Plugging the numbers into our Kelly formula, we'd be justified in wagering 10% of our bankroll in such a contest. So with the same 20% advantage in a 50/50 as in a Double Up, we're justified in wagering more money in the 50/50 (10% of our bankroll as opposed to 8%).

Let's go to the other extreme and consider some GPPs with top-heavy payouts.

Let's first consider a contest with 100 entries that pays the top 30 spots. The average player has a 30% chance of finishing in the money, but in keeping with our 20% advantage, let's assume we have a 36% chance of finishing in the money (since  $30\% * 1.2 = 36\%$ ). If we pay a \$10 entry fee, and the top 30 spots get paid, the average winner will net \$20. (The \$1,000 in entry fees, after the commission, will constitute a \$900 prize pool. That \$900 will be spread over 30 winners, so the mean win will be \$30, which is a net win of \$20 over the entry fee.) That means the average winner is getting 2-1 odds.

$$(\$30 - \$10) / \$10 = 2$$

Plugging all of that into the Kelly formula, we should wager 4% of our bankroll in this sort of contest.

$$(2 * 0.36 - 0.64) / 2 = 0.04$$

That's about half as much as we'd enter in a Double Up with a similar advantage.

Let's go all the way to the extreme and consider a \$10 winner-take-all contest with 100 entries. The average player has a 1% chance of winning. In keeping with our 20% advantage, that gives us a 1.2% chance of winning. If we win, we get paid \$900 (after the \$100 commission) for a net of \$890. So we're getting odds of 89-1. Plugging those numbers into the Kelly formula, we should wager only 0.0009% of our bankroll in this contest.

How do you know whether your advantage over the field is 0%, 10%, 20%, or something else? That's a tricky subject in itself. If you have a long history of playing DFS football, and if you've kept good records, your ROI in cash games would be the most telling clue. (Tournament results are less probative because of the higher variance.) Except that (a) none of us has a long enough history at this relatively new style of fantasy football to be confident in a precise estimate of our advantage, and anyway (b) the quality of the overall field is always changing, so solid track results in the past do not guarantee a current edge. (Similarly, poor results in the past do not mean that you haven't gained ground.)

Acknowledging that there is guesswork involved, my guess is that if you work your way through this book and use a solid set of projections and lineup-construction tools—whether your own, ours, or someone else's—it is not unrealistic to gain about 12% edge over the field without much in the way of previous DFS experience. (A 12% edge would mean being expected to cash 56% of the time in 50/50s.) As you continue to play, think about the game, and improve, your edge should grow. Keep stats as you play, and if you're cashing in fewer than 56% of your 50/50s, adjust your estimate downward. If you're cashing in more than 56% of your 50/50s, adjust your estimate upward. If you already have a solid track record, you may have reason to believe that you have a larger edge. Whatever your current estimate of your edge is, be willing to adjust it upwards or downwards based on your most recent results. Be honest with yourself, though, and don't succumb to the temptation to believe that your wins are due to great skill while your losses are due to bad luck.

So let's recap what we've learned.

1. Going broke is bad, so don't wager your whole bankroll, or anything close to it, on a single contest.
2. The bigger advantage you have in a contest, the more of your bankroll you can wager on it. If you have a 10% edge, you can wager twice as much as if you have a 5% edge.
3. If you are entering multiple contests, you can increase the total amount you wager only to the extent that the different contests are independent of each other. If your roster overlap is zero, go ahead and bet twice as much (total) on two contests as you'd bet on one contest. But if your roster overlap is total, you should bet the same amount (total) on two contests as you'd bet on one—so half as much per contest. If your roster overlap is partial, bet somewhere in between. (This is a bit of an oversimplification. Contests are not completely independent just because there is no roster overlap if the rosters were made using the same set of projections. But it's probably close enough for our purposes.)
4. Holding your advantage over the field constant, you can wager more in contests that pay out a larger percentage of the field. If you have a 20% edge over the average player, for example, you'd be justified in betting 10% of your bankroll in a 50/50 or head-to-head contest that pays 50% of the entrants, 8% of your bankroll in a Double Up that pays 45% of the entrants, 4% of your bankroll in a league or tournament that pays 30% of the entrants, and just 0.0009% of your bankroll in a winner-take-all that pays 1% of the entrants.
5. As a rough approximation, for any specified amount you intend to wager in a given week, a decent rule of thumb is to put about 80% of it into cash games and about 20% into tournaments.



*Be sure to keep track of your investment.*

The following charts show the percentage of bankroll you should put into play in each independent contest according to the Kelly Criterion, given the specified advantage you have over the field.

With a 10% edge over the field or less:

contest type	players	entry	prize pool	winners	% of bankroll
H2H	2	10	18	1	0.00%
50/50	100	10	900	50	0.00%
Double Up	100	10	900	45	0.00%
Tournament	100	10	900	30	0.00%
Winner-Take-All	100	10	900	1	0.00%

(Those are not typos. If you have a 10% edge in a head-to-head contest, for example, you will win 55% of the time while your opponent wins 45% of the time. But if you win only 55% of the time, you are failing to beat the rake, which means that you will lose money on average, so your optimal wager is zero.)

With a 15% edge over the field:

contest type	players	Entry	prize pool	winners	% of bankroll
H2H	2	10	18	1	4.37%
50/50	100	10	900	50	4.37%
Double Up	100	10	900	45	3.50%
Tournament	100	10	900	30	1.75%
Winner-Take-All	100	10	900	1	0.04%

With a 17.5% edge over the field:

contest type	players	entry	prize pool	winners	% of bankroll
H2H	2	10	18	1	7.19%
50/50	100	10	900	50	7.19%
Double Up	100	10	900	45	5.75%
Tournament	100	10	900	30	2.88%
Winner-Take-All	100	10	900	1	0.06%

With a 20% edge over the field:

contest type	players	entry	prize pool	winners	% of bankroll
H2H	2	10	18	1	10.00%
50/50	100	10	900	50	10.00%
Double Up	100	10	900	45	8.00%
Tournament	100	10	900	30	4.00%
Winner-Take-All	100	10	900	1	0.09%

With a 22.5% edge over the field:

contest type	players	entry	prize pool	winners	% of bankroll
H2H	2	10	18	1	12.81%
50/50	100	10	900	50	12.81%
Double Up	100	10	900	45	10.25%
Tournament	100	10	900	30	5.13%
Winner-Take-All	100	10	900	1	0.12%

*I believe records and stat-keeping to be the most underrated aspects of bankroll management, especially for beginners.*

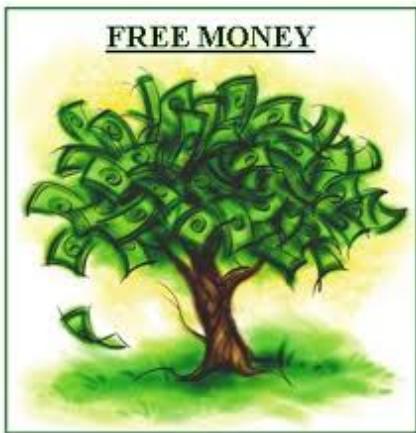
*A large part of record-keeping is being proactive. This means planning out your week ahead of time, and in many cases having at least a bi-weekly plan. Keep track of the type of contest, the buy-in, the number of players and (+/-) profit. This also goes hand in hand with game selection, as you should be browsing the contests ahead of time and then coming up with a plan for that week.*

*Record-keeping is also the best way to be impartial on when you should be moving up and down stakes. —BJ VanderWoude*

You can download a free "Bankroll Tracker" spreadsheet for Microsoft Excel from RotoGrinders.

## 5.4. Free Play Contests

By Mark Wimer



In a dream scenario, all contests would be free and award large prizes for winning (or even just for playing). How it usually works is DFS sites like FanDuel generate their revenue through commissions on paid contests. But free play contests are exceptions, don't have entry fees, and are essentially giveaways for the sites. They chalk it up to marketing costs.

Free play contests exist as a risk-free way for new players to gain experience and as a reward to regular players. FanDuel offers free play contests at various times with various formats, and partner sites, like Footballguys, sometimes have special links to free play contests.

When you play paid contests on FanDuel, you will begin to accrue FanDuel Points (or FDPs), which allow access to the following monthly free play contests:

- Bronze: \$2,000 free play contest, requires 1,000 FDP earned in a month
- Silver: \$3,000 free play contest, requires 5,000 FDP earned in a month
- Gold: \$5,000 free play contest, requires 15,000 FDP earned in a month
- Platinum: \$8,000 free play contest, requires 50,000 FDP earned in a month

You do not have to spend FDPs to enter these contests, and you can enter all of the contests for which you qualify. For example, if you earn 16,000 FDPs in a calendar month, you can enter the Bronze, Silver, and Gold contests.

The simplest way to find free play contests is to enter the lobby, click the NFL Tournaments tab, and slide the max entry fee button all the way to the left so the entry range shows \$0 min to \$0 max. And FanDuel usually sends a reminder email when you qualify for an FDP-related free play contest.

*In addition to free play contests, FanDuel also allows players to play in free contests. Although these free games do not offer prizes like free play contests do, they do allow players to earn valuable experience without risking money to gain that experience. If you are playing on a limited bankroll, I would highly recommend you try some of the strategies in this book in these free contests. You can compare your scores to those who succeeded in real-money games. Then, if you find there is a specific type of strategy you excel at, you can take the plunge and focus on using those specific strategies in paid entry games. —Steve Buzzard*

## **5.5. Bonuses**

*By Will Grant*

FanDuel has revamped their deposit bonus structure for the 2016 NFL season. The new deposit bonus plan is called The FanDuel 5-Pack. The 5-Pack is awarded to new users who create an account and deposit at least \$10. It gives the new owner five free entries into NFL 50/50 contests. The value of the contests is based on the deposit amount:

- Deposit \$10 - \$24.99 and receive 5 free \$0.25 entries into NFL 50/50 Contests
- Deposit \$25 - \$99.99 and receive 5 free \$1 entries into NFL 50/50 Contests
- Deposit \$100 - \$199.99 and receive 5 free \$5 entries into NFL 50/50 Contests
- Deposit \$200 or more and receive 5 free \$10 entries into NFL 50/50 Contests

These 50/50 contests will be offered every week of the season, so if you join after a couple weeks, you'll still be able to get the 5-Pack deposit bonus.

The contests will be awarded at a rate of one per week. Each week an email will come to your inbox with a link to the free entry. Per FanDuel rules, you must use all five entries within the first 35 days after deposit. Be sure to look for those emails and don't miss any weeks.



**Note:** Some deposit bonuses under the old system did not have an expiration date, so if you received a deposit bonus before the 5-Pack change, you may still have some left. Check with FanDuel Support if you have questions about an old deposit bonus.

## **5.6. Referrals and Player Points**

By Austin Lee and Kyle Wachtel

On all daily fantasy sites, you must read the fine print, asterisks, and legalese to get the real lowdown on referral bonuses and player rewards. It's all subject to change, but we've boiled it down to the current, quick version to get you started and let you know what to expect.

### **5.6.1. FanDuel referral bonuses**

FanDuel gives both you and your referral a \$10 bonus once the new player enters \$20 worth of contests. The \$10 bonus can be applied to entry fees and must be played through before withdrawal. When logged in, you'll find the Referral Center link under the My Account tab.

There are a few different ways to refer friends. You can enter their emails in the Referral Center to send them your referral link, or you can copy, paste, and send your referral link to them directly through any form of messaging. Be sure to give them your username as well. When they join, it may be easiest for them to click the "Got a Promo Code or Referral Username?" link and simply enter your username.

### **5.6.2. FanDuel Points**

Another way to get freebies is to earn and redeem FanDuel Points, which are also known as FDP. For every dollar in entry fees, users are awarded 10 FDP. Users are then able to use FDP to enter paid contests in lieu of money at the conversion rate of 2,400 FDP per dollar. Put another way, you'll earn a free dollar for every \$240 you spend. The option to switch from cash entry to paying with FDP is next to the "Enter" button on the contest page where you pick your initial lineup prior to entering.

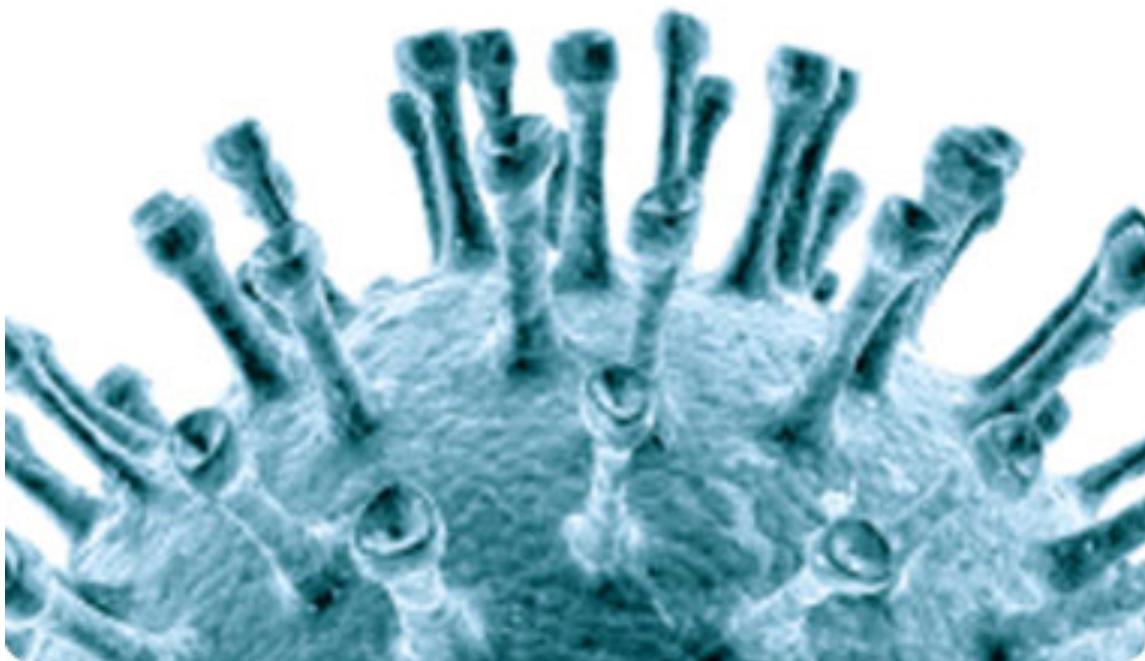
As an added bonus, FanDuel rewards its players with the following tiered monthly free play contests based on the amount of FDP you accrue each month:

- 1,000 FDP for entry into the Bronze free play contest
- 5,000 FDP for entry into the Silver free play contest
- 15,000 FDP for entry into the Gold free play contest
- 50,000 FDP for entry into the Platinum free play contest

Users are able to enter into all of the free play contests they qualify for, and those free play contests normally take place within the first 10 days of the following month. You'll be able to find them in the FanDuel lobby, and an email will be sent providing links to the free play contests you qualify for.

**6. Advanced Lineup Management**

# Advanced Topics



## **6.1. Advice about number of lineups per week**

By Maurile Tremblay

There's ultimately no right or wrong answer—how much time you want to spend entering lineups each week depends on your goals and preferences. But there are some guidelines.

### **6.1.1. Cash games**

The more you diversify by entering different lineups, the more of your bankroll you can wager, and—as long as each lineup is +EV—the greater your return will be (not as a percentage of amount wagered, but in absolute dollar amount).

The problem is that your second-best lineup won't be as good as your first-best, and your third-best won't be as good as your second-best, and so on. So there's a trade-off between quantity and quality.

If you're going to spend 10% of your bankroll on a single lineup in a given time-slot, you can probably spend 8% on each of two lineups (16% total), 6% on each of three lineups (18% total) ... the exact amounts depend on how much your rosters overlap, and even there, there is a trade-off. The less they overlap, the more diversification you're getting (justifying a higher total amount of wagers), but the less they overlap, the less they'll generally include the very best values, giving you a lower EV on the lesser lineups (militating toward a lower total amount of wagers).

### **6.1.2. Tournaments**

As with cash games, you can diversify by entering multiple lineups—and there's a trade-off between quantity and quality. But the trade-off is a bit different with tournaments, and generally a greater number of tournament lineups is warranted. When you go to your second, third, and fourth lineups and beyond, your floor generally drops faster than your ceiling. And with tournaments we're primarily interested in ceiling—so we're not losing as much in the way of EV as we would be with our Nth lineup in a cash game.

*As I improved as a DFS player, I started to pare down the number of lineups I used. Part of it was the fact I began to enter more contests, particularly cash games—it quickly became a bandwidth issue. Practically speaking, the diminishing returns became readily apparent—I did myself no favors by entering sub-optimal lineups, as fun as it might have been to see a bunch of different lineups going at once. —Alessandro Miglio*

## **6.2. Managing a large number of lineups**

By David Dodds

My philosophy on FanDuel is to play a **lot** of lower-priced 50/50 games. Some weeks I have also taken as many as 20 shots on the Sunday Million. So how does one manage so many rosters and not get in trouble should a key player scratch on Sunday?

It can be tricky, but here is my approach. I create a dummy lineup for every type of contest I want to play.

Enter these before the Thursday game starts:

- Thursday - Monday
- Sunday - Monday (Cash)
- Sunday - Monday (GPP)

After the Thursday game starts, these additional options become available:

- Sunday Only
- Sunday 1 p.m. Start

And then after the Sun 1 p.m. games start, one can also enter:

- Sunday 4 p.m.
- Late (4 p.m., SNF, MNF)
- and even Primetime (SNF, MNF, and TNF)

The key to all of this is the dummy lineups. Don't create 15 different rosters for a particular slate to start the week. There will be time to change the rosters later. If you don't wait to set rosters later, it soon becomes unmanageable if something like a late scratch impacts multiple lineups. The one exception I will make is I like to make one dummy GPP lineup so I can easily separate all of my GPPs at one time. The biggest (and most popular) GPPs are loaded up early in the week (Sunday night), so I generally will just enter in this dummy lineup to secure the spot before the contest sells out.

To get nearly 2,000 games in play with the best structures (100+ man 50/50s, large Double Ups of 300+ people), I generally look to enter new contests every four-to-six hours from Wednesday on. My plan is to have completed entering contests to match what I want to wager for the week by Saturday night.

### 6.2.1 Switching from Dummy to Real Lineups

Before the Thursday game starts, I will craft two-to-four lineups for the Thursday–Monday slate. I like to pre-plan my strategy so that I do not have too much exposure to one player or one game.

For example, say I am planning to wager \$600 on my Thursday games between three lineups. I might further choose to put \$250 on Lineup 1, \$200 on Lineup 2, and \$150 on Lineup 3. Using FanDuel’s export lineup function, it’s easy to then replace the dummy lineups with real ones a lot closer to the game start. (I generally do it after the inactives are announced or about one hour before the start of the game.) By pushing from the dummy lineup to the new lineup, you can easily view how much action you have moved over to each lineup. A little bit of tweaking here and there and you have your desired output of \$250 for Lineup 1, \$200 for Lineup 2, and \$150 for Lineup 3. Since most of my action is in games from \$1–\$5, I don’t care about the exact number of contests for each lineup. (I am managing to the dollar exposure.)

I do this for the other slates at the appropriate time as well (usually Saturday night for the Sunday starting contests and then again if necessary after inactives are announced on Sunday morning).

For GPPs, I actually like to use the Footballguys Interactive Value Charts and write the lineups into a spreadsheet. Because I routinely would go with 20 different lineups in the Sunday Million, I usually wait until late Saturday night to change my dummy GPP lineups. This allows me to also quickly view my stacks and exposure to common players. I do it this way so those lineups are not colliding with entering additional cash games and forcing myself to maneuver through 20-30 lineups each time I put an additional lineup in play.



### **6.3. Exposure Per Player**

*By Austin Lee and Chad Parsons*

For our purposes, exposure is loosely defined as how much you have invested in a particular outcome. The more confident you are in your prediction, the more you're willing to increase your exposure to it.

The concept of exposure comes up regularly in finance and business, but it also shows up in small decisions we make every day.

Should I fill the party fridge with one type of drink that everyone loves so I don't run out? Or should I broaden the drink selection to be sure I get most people's favorite?

Do I trust the weather forecasters with my limited luggage space and pack only shorts for my vacation? Or do I swap shorts for jeans and risk having to do laundry sooner?

Should I spend all of my time developing one concept? Or should I split that time to explore multiple ideas?

All of these decisions involve calibrating exposure.

In the world of DFS, each week is filled with hundreds of predictions, and each prediction is tied to a low or high percentage of the money you'll spend entering contests that week. The more you diversify your lineups, the more you flatten the swings in your bankroll. Some fantasy players understand this instinctively, but many don't analyze their exposure until they have a bad week and realize they had the same underperforming player in almost all of their lineups. Analyzing exposure in advance ensures that your favorite players get the exposure they deserve while limiting the usage of players you're less excited about.

Because the math is simpler, it can be easy to fall into the trap of calculating exposure by number of lineups or entries instead of total entry fees, but it's all about the money. For example, if you have Running Back A in one \$100 contest, he has the same exposure as Running Back B in five \$20 contests and double the exposure of Running Back C in 10 \$5 contests. If you're playing \$250 worth of contests that week, then your exposure to Running Back A ( $1 * \$100 / \$250$ ) and Running Back B ( $5 * \$20 / \$250$ ) is 40% each. And your exposure to Running Back C ( $10 * \$5 / \$250$ ) is 20%.

Most exposure calculations focus on individual players, but it's important to also consider multiplayer exposure to a specific game script prediction. For example, if the Packers are a seven-point favorite over the Colts in a game with a high over/under, you could use Eddie Lacy in some lineups and a stack of Andrew Luck and T.Y. Hilton in others. You might even diversify your investment in the Colts' passing attack by stacking Luck with Donte Moncrief in some lineups.

Notice how all of these choices play to the game script of the Colts passing from behind and the Packers running the clock on the ground? If the game doesn't play out that way, relying too heavily on that game script can kill the production of all of the players you rostered from *both* teams, and—in turn—kill a large percentage of your lineups for the week.

Diversification is not limited to a specific type of DFS contest. Whether you're entering a cash game or a large tournament, creating unique rosters with sound weighting increases a DFS player's weekly outcome floor while still generating positive gains.

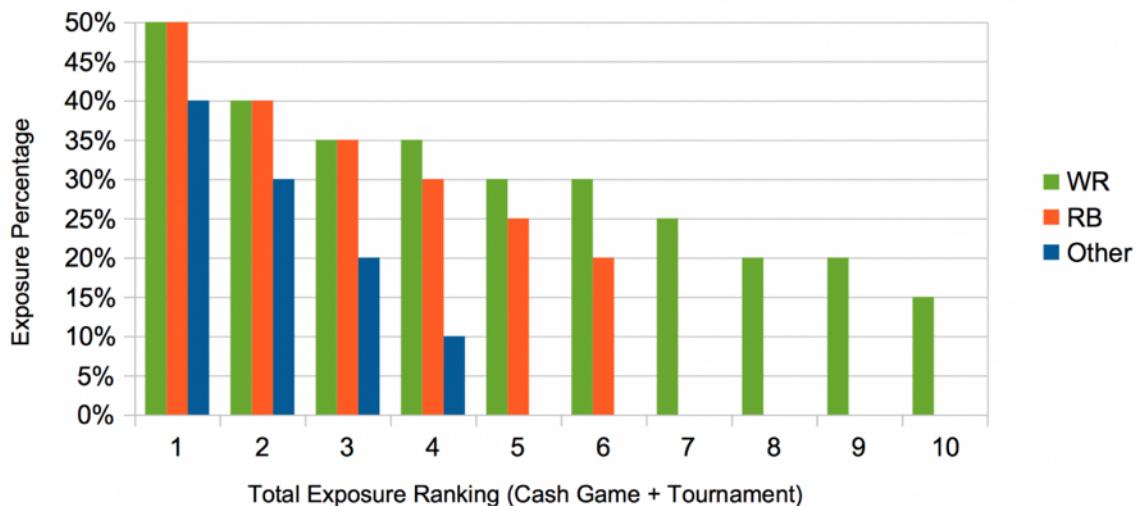
Because your exposure plan can be impacted by several factors, there aren't hard and fast rules for how you manage exposure. Your exposure strategy will change depending on the types of contests you enjoy. If pricing is tight, you'll likely have more exposure to a smaller set of players. But if pricing is loose, you'll have exposure to a lot of players and not have high exposure to any of them.

Most DFS players don't want to put a player into more than 50% of their lineups. But some risk-takers will go beyond that mark with regularity. More conservative players will spread their money across more investments, topping out in the 30%-40% range for their top players at each position.

Each week I generate separate cash-game and tournament rankings for each position. Cash-game rankings are based on player floors, and tourney rankings are based on projected ceilings. Some players appear in both sets of rankings. Each positional list contains pricing diversity, which allows for more possibilities for mixing and matching during lineup construction. I also rank my favorite stacks as part of the tournament ranking process.

When the lists are complete, I have cash and tourney menus of at least six running backs, 10 wide receivers, and four players at each of the other positions to choose from. In a perfect world, my positional exposure would match the chart below.

## Ideal Positional Exposure Based on Rankings



The horizontal axis in this chart is the ranking for the total money I have invested in a player in all contest types. It's not a reference to the cash or tourney rankings I create before constructing lineups. Players who appear on both my cash and tournament rankings lists are likely to be at the top of my combined exposure rankings even if they aren't highly ranked on either list.

As you can see in the chart, I generally don't have more than 50% exposure to a player. If I have him ranked highly for both cash games and tournaments, however, I may throw caution to the wind and roster him in as much as 70% of my investments. Like the pirate's code, this chart is more of a guideline than a rule. Some weeks the pricing and projections will tell a very different story than the ideal exposure curve can support.

Tight ends and quarterbacks typically have crowded upper tiers, meaning I'll use only two or three options across all of my lineups, increasing my exposure to them into the 20-40% range. For running backs there is often a mid-week or weekend scratch that creates a glaring value play that demands exposure over 50%. On the flip side, I use a large group of wide receivers most weeks.

There are several practical ways to manage exposure as you construct your lineups. The most straightforward way to diversify is to use multiple sources for projections. At Footballguys we offer projections from a few different experts—as well as an average of those forecasts—so you have different perspectives to choose from.

You can also leverage contest times and more limited player pools as the starting point for lineup construction. I usually play Thursday, Sunday-Monday, Sunday only, 1 p.m., and late lineups.

The variety of contest start times allows for a DFS player to segment their player usage based on availability. Attractive Thursday Night Football options are naturally limited to contests locking early in the week. Therefore, those target players would require a higher ownership level in those contests to balance out the entire week's portfolio of player shares. The same theory applies to primetime or other late-starting contests. Like the Thursday night games, this allows for balancing out players with shifting value metrics from earlier in the week or a developing injury situation.

Another practical approach is to build your lineups around your top stacks of the week. I start by pairing quarterbacks with pass-catchers and adding the highest value kicker from either team in that game. After exhausting my quarterback stacks, I'll start combining defenses with running backs or kickers.

One final way to construct diversified lineups is to anchor key positions with certain pricing tiers, which will influence how you fill out the rest of your lineup. For example, start with a stud quarterback and tight end when constructing one lineup, begin with a stud running back and wide receiver for the next lineup, and kick off a third lineup with a stud wide receiver and tight end. Generally speaking, picking two studs at different combinations of positions as your starting point will yield new and interesting lineup choices. You could also flip this concept on its head and choose cheap combos to start with.

If you plan on entering multiple lineups into large GPPs, do separate exposure calculations for each multi-entry contest in addition to your total exposure for the week. This will ensure that you have both micro and macro diversification.

Hopefully this gives you numerous options to mix and match as you create lineups and balance exposure. The most important thing is to be aware of your exposure to ensure that it reflects your player rankings for the week.

## 7. Introduction to NBA

By Devin Knotts

For most of us, the last 17 Sundays of the year are the best. Sure, the NFL also has Thursday and Monday nights and sprinkles in a few Saturdays, but at least half the week is littered with gaps. Thankfully, Footballguys is expanding their 2016 coverage to fill the midweek voids and keep your DFS train rolling after the NFL season ends. For the first time, Footballguys will venture outside of the football world to cover NBA DFS.

At the high quality you've come to expect from Footballguys, we will provide NBA tools to help new players learn the game and experienced players improve their skills. We hope NBA DFS becomes another fun way to grow your bankroll. In this chapter we will break down the game and offer strategies to prepare you for the upcoming season.

### NBA Basics

Like NFL, NBA has a \$60,000 salary cap spread across nine positions. It almost resembles an actual basketball game, where you select two at every position (point guard, shooting guard, small forward, power forward) except center. If you have never played NBA, the scoring setup is critical and can take getting used to.

The biggest learning curve for new DFS players is finding players who fill as many statistical categories as possible. The point system heavily favors rebounds, assists, steals, and blocks over real-life points scored. Below is an example of two players in actual games last year where Draymond Green scored only six actual points in the game but outscored Monta Ellis' 26 points solely because Green scored enough in other categories to offset the 20-point difference.

Scoring Category	FanDuel Points
3-pt FG	3
2-pt FG	2
FT	1
Rebound	1.2
Assist	1.5
Block	2
Steal	2
Turnover	-0.1

Player	Points	Rebounds	Assists	Steals	Blocks	Turnovers	FanDuel Points
Draymond Green	6	10	9	4	2	1	43.4
Monta Ellis	26	1	3	2	1	3	37.4



Of all the sports currently offered on FanDuel, finding NBA player news and starting lineups is the most critical. Unlike the NFL and MLB, the NBA does not require their teams to submit a starting lineup or active/inactive lists hours before the game. Instead you have to lean on people at the stadium, like beat writers attending morning practices. Footballguys will be tracking all of these late breaking injuries and how to take advantage of them as part of our new coverage this season.

One of the biggest factors to consider when creating lineups is uncertainty whether a player is in the starting lineup or not. This creates both an opportunity and a risk, as the players in the later game will inevitably be under-owned compared to those that are guaranteed to be starting in the early game.

Going with a late lineup will often differentiate yourself from the crowd, as your opposition will be scared off by the risk of starting a player who may not be playing. A lot of the time the avoidance of late players is unjustified, so unless the player is questionable or missed a practice earlier in the week, go ahead and start the player you are targeting. There may be late scratches throughout the year, but these situations are rare and can happen in nearly any game.

### ***How NBA DFS Differs from NFL DFS***

Most of us grew up playing season-long fantasy football or baseball, but basketball is relatively new in the fantasy landscape. Each sport has different tactics that can be utilized to become a successful player, but at the core, all fantasy sports are similar enough that you should not be intimidated by trying a new one. Once you master one sport, the skills you have developed transition relatively easily over to a new sport. At the end of the day, we are looking for players' production to exceed their salary.

NBA is the sport with the least amount of variance when compared to NFL and MLB. We will discuss key tactics later in this chapter, but if you are able to estimate minutes played, calculate average fantasy points per minute, and adjust for tempo changes, you will be able to project the player's likely point range.

NFL scoring is driven by catches, yards, and touchdowns. And touchdowns high point value makes them a significant variable in predicting single-game scoring. NBA players are more like running backs in a fantasy league where you only get points for yards gained. NBA scoring is based on a high volume, low impact number of plays adding up throughout the game. Top players score 45-50 points, and the most they can score on a single play is three points. That's only 6-7% of their total score. There are no NBA variance situations comparable to an NFL player catching a 50-yard touchdown pass, instantly doubling his fantasy score.

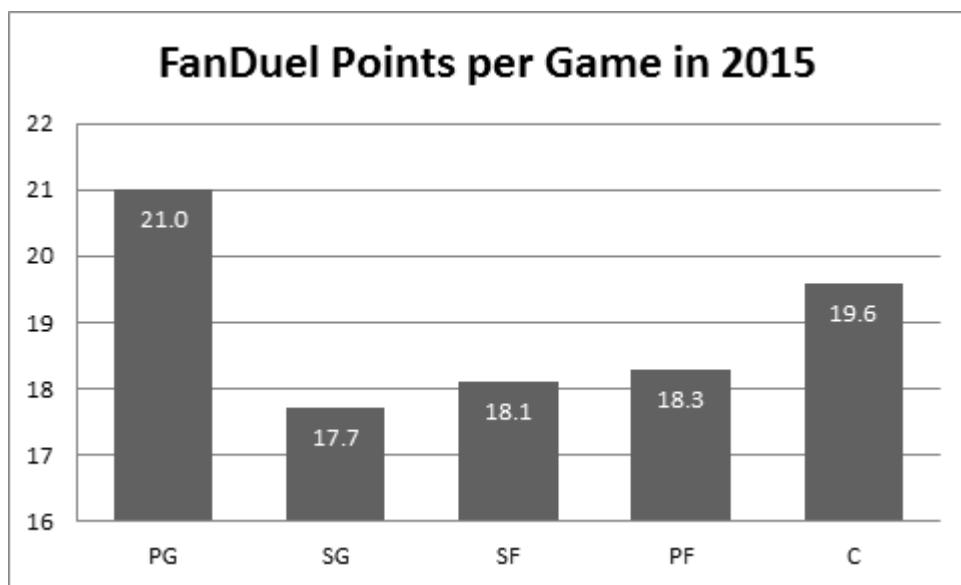
Regarding specific target scores, you are aiming to score 5x players' salaries in cash games and a 7x multiplier in tournaments. In cash games, this will mean sometimes sacrificing upside for players with a lower floor, as each player has a different range of outcomes. For GPPs, you may have to use a player with a lower floor who has the upside to get to reach 7x. Every player in your lineup does not need to hit the 5x or 7x thresholds, but across the board, you will need to hit these marks to find FanDuel NBA success.



### ***Lineup Construction and Player Analysis***

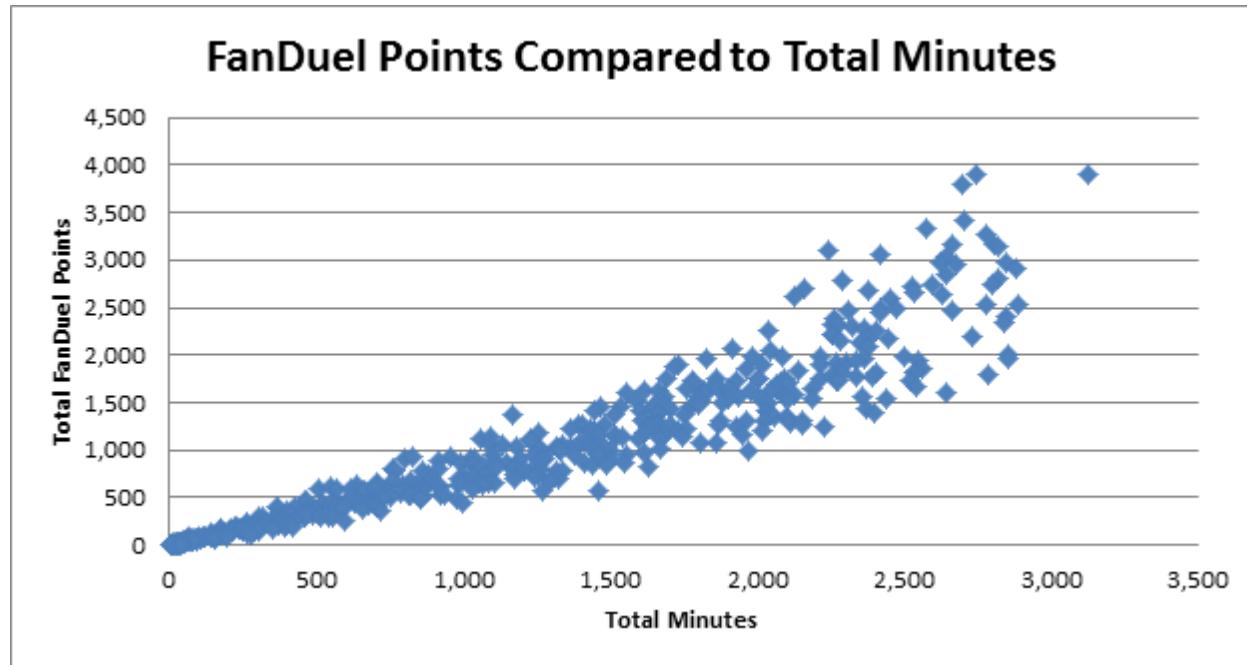
Now that we have covered the NBA basics, let's dive deeper by looking at some key lineup building strategies. At the end of the day, lineup construction and player analysis are crucial to being a successful NBA DFS player. As we mentioned before, making a bad selection can be difficult to overcome because no Hail Mary scoring play exists to turn your bad play into a great one. Instead, it takes an entire game for a player to evolve into a great play.

Below is a graph showing the number of points scored by position in 2015.



It helps to be aware of the types of players who score the most points based on opportunity, but this graph is not meant to lead you to pay big bucks for the highest scoring positions. Often times the opposite is true. If you can roster a shooting guard or small forward who scores over 40 points, then you have a bigger advantage over the average players at the same positions. Point guards and centers have the most opportunity for points. Point guards have the ball in their hands the most, and centers have the most opportunities to rebound and block shots due to their proximity to the hoop.

When building your lineup, start by identifying injury situations and consider their impact on other players. The majority of the value you will find is based on a player seeing an increase in minutes or opportunity due to another player not playing. Since there are 82 games in a season, the pricing algorithm has a player's baseline pretty well established based on season-long average and recent game history. If a starting player is out and typically averages 35 minutes per game, how have those minutes been allocated when that player has been out in the past? Has it been an almost one-for-one swap of the backup getting all of those minutes, or is his time split between a few different players? If it is the latter, this doesn't create a great value situation as it is hard to get upside with a player who may only get 15-20 minutes per game. Below is a chart showing the direct correlation between total minutes played and fantasy points scored.



Pace of play is another component critical to establishing your lineups. Unlike other sports, the NBA has a shot clock which essentially guarantees that 24 seconds from now there will either be a shot taken or a change in possession. Some teams utilize more of that clock than others as they use a slow tempo as part of their strategy. Other teams prefer a fast paced tempo.

Last season there was an eight-possession spread between the team averages for possession per game with Sacramento leading with 103.7 and Utah at 95.4. If your player faces a team with a high number of possessions per game, you will benefit from them receiving more opportunities than usual. FanDuel does not reveal the details of their salary algorithm, but we know the salaries do not fluctuate much on a night-to-night basis. Players' prices typically align to their recent average. So if a player is facing a team with a high tempo, there is an opportunity to target him.

### 2015 Teams with Most Possessions per Game

Team	Possessions per Game	Points per Game Allowed
Sacramento	103.7	109.1
Golden State	103	104.1
Boston	102.6	102.5
Phoenix	101.9	107.5
Washington	101.8	104.6

### 2015 Teams with Fewest Possessions per Game

Team	Possessions per Game	Points per Game Allowed
Utah	95.4	95.9
Toronto	96.2	98.2
San Antonio	96.4	92.9
Cleveland	96.4	98.3
Miami	97	98.4

Vegas totals are another great indicator of what type of game this is going to be, as you can easily derive the total number of points that a team is expected to score based on the O/U and the point spread. A game's over/under can vary wildly, all the way from 188 points in a matchup between slow paced, inefficient offenses, to the 230 we saw last year when Oklahoma City played Golden State. The average total of a game will be around 200, so pay close attention to games deviating significantly higher or lower.

Point spreads can also alert you to situations where key players might sit out the fourth quarter. Starters often rest during the end of the third quarter and the beginning of the fourth quarter before returning to play most of the last period. But if a team leads by 15 or more when the starters would ordinarily return to the game, then you run the risk of them only playing a few more minutes or not coming back at all. This obviously hinders their fantasy value as we want the maximum number of minutes a player can play. So if a player such as Lebron James averages 1.4 points per minute and only plays 30 minutes instead of his usual 36, you could miss out on the 8.4 fantasy points he would have scored in the fourth quarter.



The remainder of the roster building process will involve selecting players with the best value-based projections at positions where your roster is still empty. The best tool for the job is Footballguys' Interactive Value Charts, which use our daily player projections and build an optimal lineup based on your initial selections.

### ***Game Selection: Cash Games versus Tournament Strategies***

Understanding game selection and game theory is as important to your overall strategy as building lineups and evaluating players. Just like other DFS offerings, cash games include head to head, 50/50, double up, or three man contests where you only have to beat a small percentage of the field to make money. In cash game contests you are looking to make a safe lineup with a high ceiling but also a high floor. You will likely be willing to sacrifice some of the ceilings as long as the floor is higher to guarantee yourself points.

A Tournament (commonly referred to as a GPP) is a contest where a much smaller percentage of the field wins, making it critical to differentiate yourself from the crowd. In a GPP you will likely take more risks as you need the most possible points to beat everyone in the contest. So unlike cash games, you need to take some risks in tournaments on high-ceiling players with low floors.

In cash games for NBA, you are going to want to select the best value plays of the day no matter how popular they are. These players often fill in for injured players or see increased minutes when a fellow starter is out. Russell Westbrook is the best example of a starter benefitting when another starter was injured. Let's look at how he performed with and without Kevin Durant over the last two seasons.

Russell Westbrook	GM	MPG	PPG	RPG	APG	TO	Steal	Block	FG%
with Kevin Durant	99	33.9	23.2	7.6	9.8	4.1	2.0	0.2	44.9%
without Kevin Durant	48	35.4	30.5	7.6	9.2	4.8	2.2	0.4	42.6%

As you can see when Durant was out, Westbrook averaged seven points per game more when Durant was absent. Unfortunately, we won't benefit from understanding this situation in 2016 as Durant moved to Golden State. But the key is to identify trends like this and adjust accordingly if a star player is out of the lineup.

For NBA tournaments, a few strategies can increase your odds of success. The first is to differentiate your team from the crowd by being contrarian. Each player has a range of outcomes, and even in the best matchup, they may not perform. They may get the opportunities everyone expected, but the shots still have to go in the basket for them to perform from a fantasy perspective. The DFS world has cases where people suffer from group think. Sometimes everyone rosters the same player because he statistically projects to be the best play of the night. But projections are based on the most likely scenario, not the full range of outcomes. If 40% of people have one player who you fade and he significantly

underperforms, then all of a sudden you have a significant advantage over 40% of the field. Another strategy is game stacking. While this isn't as popular in the NBA as it is for MLB or NFL, it can still work, especially when stacking opponents against each other. While it is almost impossible to predict overtime games other than selecting a close game to stack, getting an extra five minutes from multiple players in a game you stacked will pay dividends.

Let's take a look at a game last season between Golden State and Oklahoma City. While it would be unlikely you would be able to fit all of these players into the same lineup, having a core of these players in your GPP would have made for a very good night.

Oklahoma City	Fantasy Points
Kevin Durant	64.4
Russell Westbrook	57.2
Serge Ibaka	46.4

Golden State	Fantasy Points
Steph Curry	61.3
Draymond Green	59.5

The primary reason stacking is not a popular choice is that it is uncommon to see so many teammates reach value. Remember, we are trying to get 7x the salary for GPP players. If one player reaches the 7x mark it often impacts his teammates. There are only so many rebounds, assists, and points to go around. It is possible, but the points are not as correlated as NFL or MLB, as each team is likely to score within a much smaller range of total points. For MLB or NFL, you are looking for a team that can go crazy and over perform their typical range, but you really don't see the extreme variance in NBA total points scored to make stacks as popular as they are in other sports.



## **Bankroll Management**

Going from NFL to NBA is a big change from a bankroll management standpoint, and there are strategies you should use to withstand the ups and the downs. Below are some guidelines to help you recover from random variance so your skill can win out in the long run.

Most importantly, start slow if it is your first time. There have been far too many instances where people have a successful NFL week, and by the time the next NFL week comes around



they either have to redeposit or play with less than when they started. Many DFS players fall into the trap of playing in the same stakes in every sport even though they are significantly better in some sports than others.

Without as much season-long popularity as NFL and MLB, fantasy NBA is relatively new for most people, so the learning curve is steeper. Make sure you become familiar with the game prior to stepping up to the stakes you play with more familiar sports. Even if you are a huge

NBA fan, the fantasy game is different. Remember how long it took you to become a fantasy expert in the other sports you play. Study the lineups of winning DFS players and try to reverse engineer their rosters to better understand the reasoning and strategy behind their picks.

Be sure to limit the amount you wager each day. A true bankroll doesn't mean the amount in your FanDuel account. It is the amount you are willing to invest, and if you lose it, you will not redeposit. The goal is to maintain a bankroll throughout a season and even grow it. For context, the NFL season is 17 weeks excluding the playoffs, and for the NBA there are 180 days. There are more than 10x as many slates for NBA as there are for NFL. You can have a successful year in NFL, but over the course of 17 weeks it may largely be due to variance. You would need a few years to determine if you are a good player based on hot and cold streaks. For NBA, you will have several hot streaks and cold streaks throughout the year if you play every single day. The key here is not to increase your percentage of bankroll in play solely because you're on a hot streak, but instead keep the same percentage throughout the year. As your bankroll grows, play more. If your bankroll decreases, lower the amount you play but keep the same percentage. We can't give you an exact percentage of how much to play, but here is a table with some general guidelines.

Cash	GPP	Bankroll Risked
100%	0%	8-10%
50%	50%	3-5%
0%	100%	2-3%

## ***Summary***

The intent of this chapter was to provide an overview of how to approach and employ winning strategies for NBA DFS on FanDuel. As we get closer to the start of the NBA season, we will release additional content covering these topics in more depth.

1. Monitor Twitter, beat reporters, and our lineup alert page to determine when a player is out and which players benefit the most.
2. Monitor teams benefitting from up-tempo matchups.
3. Start with the value plays, then select players likely to overperform based on matchup. Then target players projected to perform well who have the upside or floor that strategically matches your contest type.
4. Ensure your cash game players are starting and receiving significant usage/minutes. Often times there are must plays in cash games.
5. With games that start late, be sure the player is starting in cash games, otherwise avoid any player in doubt as a zero will almost be an automatic loss.
6. Utilize optimizers, projections, and articles to ensure that your lineup agrees with quantitative analysis.
7. If you want to stack, stack players on both sides of the game. Unlike NFL and MLB, it takes two teams to produce a high scoring NBA game. Stacking is considered a very risky strategy.
8. Bankroll management strategies should be different than NFL as the season is longer, and there is more variance.



## **8. Introduction to MLB**

By John Lee

As a Footballguys subscriber, you assuredly are more informed than the everyday fantasy football player. Your access to the best minds in football has likely led you to multiple season-long championships and, because you are reading this book, some success in daily fantasy contests. The unfortunate truth, however, is NFL season only lasts four spectacular months, which means you will either be forced to take an eight-month hiatus from DFS or become an expert in an alternative sport. This short chapter should help you with the basics of major league baseball (MLB) and put you on a path to become a profitable player for a sport that is played over half the year.

### **MLB Basics**

When entering an MLB contest on FanDuel, you will first note your salary cap is only \$35,000 (versus \$60,000 for NFL). Across nine positions, that equates to less than \$3,900 per player to spend your entire salary cap. FanDuel is very intuitive from a standpoint of roster composition since the roster spots are the same as an MLB lineup—a starting pitcher, catcher, first baseman, second baseman, third baseman, shortstop, and three outfielders (outfielders are not split into left, center, and right field).

Scoring for FanDuel's MLB product was altered in the Spring of 2016 to generate higher scoring. The primary result has been winning scores routinely surpassing 150 points, as opposed to 40 points representing a winning score in years past. Scoring is broken down into two broad categories: pitching and hitting. Pitchers obviously generate pitching points and hitters accumulate points for what they do at the plate.

Your Lineup		\$35,000	\$3,889
		SALARY REMAINING	AVG/PLAYER
P	Add player		
C	Add player		
1B	Add player		
2B	Add player		
3B	Add player		
SS	Add player		
OF	Add player		
OF	Add player		
OF	Add player		

Pitchers do *not* collect points for what they do when batting in any circumstance. See below for specifics regarding FanDuel MLB scoring:

Hitter Scoring Category	FanDuel Points	Pitcher Scoring Category	FanDuel Points
Single, Walk, or Hit by Pitch	3	Win	12
Double	6	Earned Run	-3
Triple	9	Strikeout	3
Home Run	12	Inning Pitched	3*
Run Batted In (RBI)	3.5		
Run	3.2		
Stolen Base	6		

\* fractional scoring per out

Of all the sports currently offered on FanDuel, weather is probably most important for MLB. When playing NFL DFS, for example, weather is a factor when determining how you want to approach a certain player (like not paying top dollar for a quarterback in a windy thunderstorm), but games are almost never canceled altogether in NFL (or NBA). In MLB, you must monitor the weather every day to ensure you do not fall victim to the dreaded rainout, which will net you a total of zero points for any players involved in that game. On average, there are only 35-40 rainouts per season, which represents a small fraction (~1.5%) of the total games played, but there are considerably more games with rain delays that can also affect your fantasy prospects.

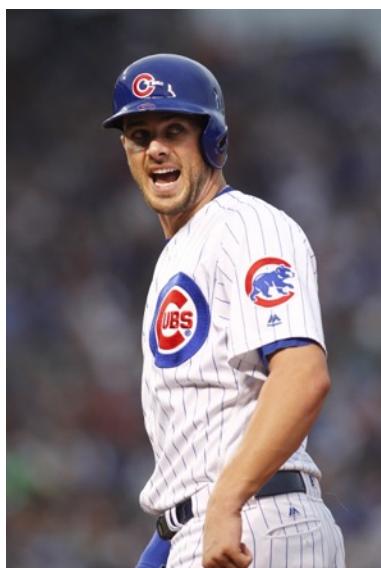
This latter concern (rain delays) is most prominent when you are considering a starting pitcher from a game where there are weather concerns. If a game starts at 7 PM and goes only a few innings before rain causes the tarp to be put onto the field, it is not uncommon for the starting pitcher to be removed from the game entirely after a 30-minute (or longer) delay. Since the starting pitcher can often represent one third of your overall salary cap and possible point production, this is a risk rarely worth taking. Always consult local radar maps for the game in question, check the hourly precipitation forecasts, and ensure you do not roster a pitcher who could get pulled early due to weather. For positional players, the line of distinction is not as clear-cut. If there are reasonable alternatives for the position you are considering, you might want to take the safe route and roster one of those alternatives; however, if the game is at Coors Field, where team totals are routinely 25% higher than a typical ballpark, you might want to absorb the risk associated with the weather possibilities to gain exposure to that upside. A similar debate could be observed for cash games versus GPPs, where playing it safe with weather is more advisable in cash games, but gaining exposure to players in a potential rainout could yield significant upside if ownership levels are low enough. As a general rule of thumb, you should start paying attention to weather at a threshold of 30% chance of showers. Above that number and you could be in risk of delays and/or an outright cancellation; rostering players from games where the chance of rain is below that number tends to be fairly safe.

Last thing about weather: Always consider the possibility of makeup games when gauging how committed a team might be to have a game played in suboptimal weather. If it is the last game of a three-game set between two teams who meet only once a year (i.e., interleague play), those teams are going to be far more willing to wait out a two-plus hour rain delay than two teams who have another two series scheduled next month. In other words, an interleague game in mid-August with a shaky forecast is almost assuredly going to be played, whereas a rainy division rivalry in April between two teams who are scheduled to play each other 15+ more times is far more likely to be cancelled and played as a double-header on another day.

## ***How MLB DFS Differs from NFL DFS***

Understanding the nuances of each DFS sport will ultimately be essential to improving one's return on investment (ROI), but it is first necessary to recognize the major differences between those sports on a strategic level. Luckily, none of those differences are overly complex, but they should be discussed before we delve deeper into roster construction and overall strategy.

The first major difference between NFL and MLB DFS is variance. We have discussed at length how NFL scoring is highly-variant compared to NBA scoring, but neither of those sports comes close to the amount of variance observed in major league baseball. Think about it—the best hitters in the league fail 70% of the time and only get (on average) four opportunities per game to score fantasy points. In the NFL, the WR3 for any given team routinely gets that many opportunities each game but are rarely considered strong plays. For this reason, bankroll management is probably most important for MLB, particularly when one takes into account that there are 180+ days of MLB DFS each season.



Directly related to the heightened variance associated with MLB scoring, there is generally no specific target score for MLB contests. With NFL DFS contests, we start with \$60,000 and hope to generate a roster capable of scoring 120 points to win cash games and 180 points to be competitive in tournaments; for baseball, those numbers are dramatically different due to nightly variance. On certain nights, you may need 250+ points to win a GPP, but a smaller game slate with moderate scoring might require only 170 points to pull down a tournament. The same could be said for cash games, where 150 points could win you money tonight but lose you money tomorrow. We will discuss roster construction in an upcoming section to help build the best roster possible, but it is worth noting how extreme variance is in MLB. Your success should be measured over a far larger sample size than with NFL (or NBA).

When playing MLB DFS, you will almost always build your roster around your starting pitcher. The primary reason is the pitcher has the most scoring potential of any player on the field due to sheer opportunity. If the pitcher has a great outing, he will throw 27 outs, each of which will

earn him a point, not to mention the value of a strikeout (3 points) and a win (12 points); even on the best of nights, a batter will rarely earn more than five at bats, which severely limits his ability to accrue fantasy points. In essence, a pitcher provides a scoring floor, which is essential for consistent success in MLB where failure occurs at such a high rate. All of this is in direct contrast to NFL DFS, where there is no reason to build around a specific position because no singular position carries the equivalent weight of the starting pitcher.

The last major difference between NFL and MLB DFS is sheer frequency of games. In NFL, we have to wait an entire week between games and there are only 17 opportunities to capitalize on our research; in MLB, there are games almost every day for six consecutive months. This reality has both pros and cons. The biggest pro is profitable DFS players can get their money into play every night to maximize their ROI. That reality is contrasted against the amount of research and effort that goes into analyzing matchups every night; it can become a grind even to the most dedicated of DFS lovers. For these reasons, the best approach is to earmark specific days where you take a break from playing to keep your edge and refresh your mind. You might consider Thursdays, where many teams are traveling and the game slates are more limited, and possibly a day off over the weekend to spend time with your loved ones. Whatever you decide, do not be afraid to back away from the keyboard to keep your mind sharp.

### ***Lineup Construction and Player Analysis***

There is zero doubt that lineup construction is the single most important skill in becoming a profitable DFS player. Knowing how to accurately project player output and build winning rosters is a learned skill. This section will begin to touch upon the steps you need to take when building rosters and considerations successful DFS players take into account on a daily basis.

As discussed above, there is almost no situation where you want to build a roster without slotting in your starting pitcher as your roster's backbone. The starting pitcher is going to be the most predictable player on a MLB DFS roster; think of names like Clayton Kershaw, Noah Syndergaard, and Madison Bumgarner, all of whom routinely pick up a strikeout per inning and put their respective clubs into a position to pick up the win.

Meanwhile, Mike Trout, who is arguably the best offensive player in the world, will still fail more than he succeeds at the plate, making him a far riskier DFS play than top-end pitching options. For this reason alone, you will always want to spend the bulk of your salary on pitchers who you perceive to be in a good spot to perform favorably.



In a previous section, you read there is no specific target score for MLB contests on FanDuel. For that reason, building rosters for MLB does not include taking into account “multipliers” as we have recommended for both NFL and NBA. For NFL cash games, the multiplier is 2x,

whereby a player with a \$9,000 salary is expected to score 18 fantasy points to justify rostering him; for NBA cash games, the multiplier is 5x, which means LeBron James' \$10,000 salary necessitates him returning 50 fantasy points to ensure a good return on that investment. In MLB, these multiplier values are largely non-existent because of variance. However, it is good

practice to target pitchers projected to achieve 4x their salaries (i.e., a \$9,000 pitcher should be projected to score > 36 fantasy points). The reason this rule can be applied to pitchers is because they are far more consistent performers than hitters because of the general success rates of both parties (pitchers and hitters).



When rostering a pitcher, it is advisable to consider those who are projected at 4x or higher from their respective salaries and ultimately choose the highest-priced pitcher with the best (Vegas-based) odds of picking up the 12-point win in their contest. Choosing the highest-priced pitcher with those parameters ensures you are getting the highest percentage of your salary as possible into a the most favorable situation; it is similar to H-value (discussed earlier in this book) whereby two

players with similar multiplier values can be qualitatively separated based on salary, with the more expensive player becoming more valuable due to overall number of fantasy points returned for the investment. As an example, if Jake Arrieta's projections indicate that he will score 44 points for his \$11,000 salary, you would almost always choose Arrieta over a lesser-talented, lower-priced pitcher (i.e., Jimmy Nelson with 30 projected points at a \$7,500 salary) who also has a 4x multiplier value. Over a prolonged sample size, taking the most expensive pitcher with the highest projected value will yield the most consistently high-scoring rosters.

After you have selected a pitcher with whom you are comfortable, you will have an idea of how much salary (per player) you have remaining from which to round out your roster. Generally speaking, it is advisable to identify the best value-based options on the entire slate to ensure that you are maximizing your scoring potential. These extreme values tend to be the result of one of several factors: a player who was moved from the bottom to the top of the batting order, a minor league prospect who is not yet appropriately priced by FanDuel's salary algorithm, or a player who excels in certain situations (i.e., one who hits left-handed pitchers very well) and is making a spot start for that reason. In most cases, these players can be found at or near site-minimum salary (\$2,000), where the opportunity cost is low and affords salary flexibility at other positions.

At this point, you will have identified a starting pitcher and slotted some extreme value players into your lineup. The remainder of the roster building process will involve selecting players with the best value-based projections at your remaining empty roster positions. This is most-easily done using a software program like Excel Solver, but there are third-party applications (i.e., FantasyCruncher, Interactive Value Charts on Footballguys, etc.) that can also define the highest-projected lineup using your projections.

## ***Game Selection: Cash Games versus Tournament Strategies***

If you are reading this book, you have already learned that there are distinct differences in how to construct a cash game roster versus a tournament roster for NFL-based daily fantasy games. Consistency and opportunity are the basis for cash games, whereas stacking and rostering high-upside players constitutes optimal GPP strategy. The good news is that MLB strategies mirror NFL strategies in many cases, so if you are an expert at generating those types of lineups for NFL games, the approach will be similar for MLB-based games.

For cash games in MLB, you will want to roster the best pitcher with an optimal matchup who oddsmakers project as the biggest favorite. That trifecta is the keystone of a winning cash game lineup. If your cash game pitcher consistently nets 40+ points in a somewhat predictable fashion, your rosters will have generated a sizeable scoring foundation from which your hitters can get you above the cash line (for 50/50 contests); if, however, your cash game pitcher fails,

there is too much ground to make up with your hitters to consistently cash. For this reason, you must make the starting pitcher the foundation of your cash game lineups.



After your cash game pitcher is chosen, you will want to complete your roster with players who are projected to achieve maximal value (projected points per dollar). An important caveat is to try to roster players for your cash games who are batting higher in the lineup. It certainly is

open for discussion, but a general rule-of-thumb is to only roster players batting 5th or higher because those batters are most likely to get additional at bats as the game winds to a close. Of course, if your projections demonstrate that a shortstop batting 8th at site-minimum is a great play, you should give that player serious consideration because those projections should have his batting position incorporated into his final projection numbers.

For MLB tournaments, there are a number of possible strategies, all of which are viable approaches. First and foremost, stacking is a must across all approaches. Stacking is the process of rostering players in tandem whose fantasy output is positively-correlated. In NFL games, stacking a WR with his QB is highly-correlated because in order for the WR to catch a touchdown pass, the QB will have to be the one to throw it; in essence, any touchdown to that receiver is worth 10 points, instead of 6 points. In MLB, stacking involves rostering players who are adjacent to one another in the lineup. If the leadoff batter gets a double (6 points), the player following him is walked (3 points), and the batter in the three-hole hits a home run (12 points plus 10.5 points for RBI's), your roster will amass a quick 41.1 FanDuel points because each player will have earned his way on base and subsequently scored (9.6 points). Stacking is a powerful tool in MLB DFS and winning GPP lineups almost always employ this strategy in one format or another.

FanDuel allows a maximum of four players per team, which means you can stack two offenses with a pitcher from a third team to complete a GPP lineup. This approach is commonly referred to as the “Two Team Mini-Stack” strategy. With this strategy, the DFS player is betting the two rostered offenses will score a lot of runs; if either offense struggles, the lineup has no chance of cashing even at the lower end of the scale. This strategy likely represents the highest-upside approach to MLB roster building, but it is arguably the toughest to perfect because nailing those two high-scoring offenses and a successful pitcher within the salary cap is a rare event. The lineup to the right, stacked with Orioles and Mets, is a representative example. Yu Darvish anchored the lineup with more than a 4x multiplier, and multiple players in each team’s stack had strong outings.

POSITION	WON	SALARY	OWNED	
10th / 304	\$1,500			208.40
				0 INNINGS REMAINING
P Yu Darvish TEX 5 @ HOU 3 FINAL	\$9,600	SALARY	45.1% OWNED	45
C Matt Wieters BAL 10 @ CWS 2 FINAL	\$2,900	SALARY	16.1% OWNED	0
1B Chris Davis BAL 10 @ CWS 2 FINAL	\$3,600	SALARY	35.2% OWNED	27.7
2B Neil Walker NYM 3 @ DET 1 FINAL	\$3,100	SALARY	20.7% OWNED	22.2
3B Manny Machado BAL 10 @ CWS 2 FINAL	\$3,900	SALARY	23.7% OWNED	70.1
SS J.J. Hardy BAL 10 @ CWS 2 FINAL	\$2,500	SALARY	5.6% OWNED	21.7
OF Jay Bruce NYM 3 @ DET 1 FINAL	\$3,800	SALARY	30.6% OWNED	0
OF Curtis Granderson NYM 3 @ DET 1 FINAL	\$3,200	SALARY	25% OWNED	3
OF Michael Conforto NYM 3 @ DET 1 FINAL	\$2,200	SALARY	13.2% OWNED	18.7

POSITION	WON	SALARY	OWNED	
1st / 39450	\$12,000			273.70
				0 INNINGS REMAINING
P Dylan Bundy BAL 10 @ CWS 2 FINAL	\$7,100	SALARY	10.6% OWNED	51
C Buster Posey SFG 0 @ WAS 1 FINAL	\$2,900	SALARY	20.8% OWNED	6
1B Chris Davis BAL 10 @ CWS 2 FINAL	\$3,600	SALARY	17.5% OWNED	27.7
2B Brian Dozier MIN 6 @ TAM 3 FINAL	\$3,800	SALARY	10% OWNED	15.7
3B Manny Machado BAL 10 @ CWS 2 FINAL	\$3,900	SALARY	18% OWNED	70.1
SS J.J. Hardy BAL 10 @ CWS 2 FINAL	\$2,500	SALARY	4% OWNED	21.7
OF Shin-soo Choo TEX 5 @ HOU 3 FINAL	\$3,800	SALARY	8% OWNED	15.4
OF Miguel Sano MIN 6 @ TAM 3 FINAL	\$3,700	SALARY	5% OWNED	47.4
OF Max Kepler MIN 6 @ TAM 3 FINAL	\$3,700	SALARY	15.3% OWNED	18.7

Another approach to building a GPP lineup on FanDuel is to take a “Modified Two Team Mini-Stack,” whereby the DFS player rosters several (less than four) positively-correlated offensive players from multiple teams and rounds out the roster with high-upside hitters from other teams. This is probably one of the more popular approaches within the DFS community because it affords the roster builder the ability to spend all of one’s available salary, particularly when a two team mini-stack approach is too expensive or leaves too much salary on the table. The lineup on the left is a good example, where Buster Posey and Shin-soo Choo were used as filler around the three-batter Twins and Orioles stacks.

One strategy that can be profitable is to choose a high-upside pitcher, a single team stack, and then complete the roster with cash game players. The benefit of this approach is you only have to hit a single team stack, which is far easier to predict than having two teams score an excess of runs. If your team stack performs well, you are then relying upon cash game players to meet or exceed your projections; while those players are likely not positively-correlated, there is credence in this approach because those players are presumably those most likely to succeed on that particular slate. In the example on the right, the DFS player paid up for Yu Darvish at pitcher, stacked four Orioles, and filled the rest of his roster with players from three different teams.

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POSITION	WON	INNINGS REMAINING	
P Yu Darvish TEX 5 @ HOU 3 FINAL	\$1,500 SALARY	45.1% OWNED	45
C Buster Posey SFG 0 @ WAS 1 FINAL	\$2,900 SALARY	31.9% OWNED	6
1B Chris Davis BAL 10 @ CWS 2 FINAL	\$3,600 SALARY	35.2% OWNED	27.7
2B Kolten Wong ATL 6 @ STL 3 FINAL	\$2,500 SALARY	20.1% OWNED	15.2
3B Manny Machado BAL 10 @ CWS 2 FINAL	\$3,900 SALARY	23.7% OWNED	70.1
SS José Iglesias NYM 3 @ DET 1 FINAL	\$2,200 SALARY	3% OWNED	3
OF Brandon Moss ATL 6 @ STL 3 FINAL	\$3,400 SALARY	25.3% OWNED	9.5
OF Adam Jones BAL 10 @ CWS 2 FINAL	\$3,500 SALARY	33.5% OWNED	15.4
OF Hyun Soo Kim BAL 10 @ CWS 2 FINAL	\$3,200 SALARY	9.9% OWNED	15.4

The last approach a person could justify for GPP contests on FanDuel is to use a cash game lineup in certain occasions. Generally speaking, using a cash game lineup in tournaments is a negative expected value endeavor over the long term, but in certain situations, playing a cash game roster in a GPP can be advantageous. First, playing a cash game roster in a small-field GPP (< 300 entries) can be lucrative because

half of those entries will likely be stacks that do not score a lot of runs, which means your cash game roster only has to beat 150 entries to win and 90 entries to cash (most GPPs pay out to the 20th percentile); if your cash game roster has a good night, it is not unreasonable to see it score enough points to win a smaller GPP. A secondary place where a cash game roster could bink a GPP is on nights where there are only a handful of



games. In those smaller game slates, if none of the teams scores more than six runs (or thereabouts), stacks involving those teams will not achieve enough positive scoring correlation to achieve a high score; in those instances, a solid cash game lineup could be enough to finish near (at) the top to pull off the upset win.

Stacking is certainly a key determinant in constructing winning GPP lineups, but how should we approach pitching for GPPs? The biggest key for choosing a pitcher to headline your GPP lineup is upside. If your potential pitcher has not thrown more than 85 pitches all season, there is little reason to believe that he will make it past the fifth or sixth inning tonight. Likewise, if the average pitcher in MLB strikes out ~20% of batters and you are considering a pitcher with an 11% strikeout rate, he probably does not possess the upside you need to win a GPP. You should always be searching for upward-trending pitchers who have displayed upside in the past and are facing lackluster, strikeout-prone offenses; considering low-upside pitchers simply because you believe they will be low-owned will rarely garner the type of fantasy numbers necessary to win a GPP and therefore should be avoided as a general principle.

## ***Bankroll Management***

The highly-variant nature of MLB DFS dictates that strict bankroll management be employed to withstand the inevitable sustained losing streaks that accompany a six-month season. With NFL DFS, one could make the argument that a lesser number of contests over the course of the season mandates getting a higher percentage of one's bankroll into play each weekend; that number, depending on whom you ask, could be anywhere from 8% to 20% of one's entire



bankroll. In MLB, there is rarely a reason to play more than 10% of one's bankroll in any given night simply because it is entirely possible to lose for five or more nights in a row, even for the best DFS players in the world. With that type of variance in play, risking more than 10% of one's bankroll at a time is a dangerous proposition, although the level of inherent risk is certainly correlated to the types of games the DFS player enters (head-to-heads, 50/50's, GPPs, multipliers, etc.).

There is no magic formula for determining the perfect game distribution for a MLB DFS player because each player has his own predetermined risk tolerance. Some players play DFS to increase their level of interest in the games and potentially grind out a small profit. Others are merely playing for the possibility of a big five-figure payday (or higher). Whatever your goals, you should have a plan in place to achieve those goals. If you are looking to be a long-term, profitable player, you should focus at least 75% of your action in large-field 50/50's with a minor portion of that money (~10%) going

towards smaller denominator multipliers (triple-ups). The remaining 10% to 25% of your action would go towards tournaments with an emphasis on those of the smaller-field, single-entry variety. As you gain experience and demonstrate long-term profitability, you might justify entering larger-scale tournaments with multiple entries, but the initial suggestion is to start small and exhibit success before playing in those tournaments with more established players.

## ***Summary***

The intent of this chapter was to provide an overview of how to approach and employ winning strategies for MLB DFS on FanDuel. Subsequent versions of this chapter will be expanded and ultimately crafted into a free-standing book on MLB DFS, but until that happens, be sure to remember these key points:

1. Always monitor weather forecasts for games where you are considering players.
2. MLB is the most variant of the major DFS sports, which means sound bankroll management is essential for long-term profitability.
3. The starting pitcher is the foundation of cash game roster construction.
4. Because opportunity is the basis for fantasy scoring, pitchers are always more predictable than hitters in MLB DFS.
5. While multipliers are not as imperative for roster construction as in NFL and NBA, targeting a 4x multiplier value for pitchers is a good guideline.
6. For cash game pitchers, always roster the most expensive pitcher with a 4x multiplier projection value who is most favored to win his game by Vegas oddsmakers.
7. Utilize software, such as Excel Solver, to generate optimal lineups predicated on value-based projections.
8. Stacking is essential for constructing winning GPP lineups in the vast majority of instances.
9. Never roster a pitcher in GPP lineups who has not displayed an ability to accrue significant fantasy points.
10. Bankroll management strategies should be in line with the DFS player's short- and long-term goals.



## **9. DFS Glossary**

This glossary contains terms and phrases commonly used in the context of daily fantasy sports whether or not they appear in this book.

**50/50 contest:** A contest in which the prize pool is split evenly among the top 50% of the entrants. For example, a game with 50 entrants would have 25 winners. The amount of cash won by each person is slightly lower than double the entry fee, and it depends on the site's commission. For example, a contest with a \$50 entry fee might have a \$90 prize.

**Action:** Competition in a contest. Players who create head-to-head matchups that are awaiting opponents to join their contests are said to be trying to create or get action, thus increasing the amount of dollars in play for their DFS lineups that week.

**Bankroll:** The amount of money a DFS player has set aside to wager in contests, such that if he lost that amount, he'd be unable to place any more bets until he finds an outside source of additional cash.

**Bearish:** A feeling against or not liking a player or contest. For example, the belief that a given player or team may not perform well or that a contest may not offer a very good payout structure. The opposite of **bullish**.

**Boom/Bust:** A player who has the potential to have a really big performance ("boom") or virtually no contribution ("bust") for the upcoming week. A boom/bust player often projects low despite his potential to post a high score because he's less likely to boom than bust.

**Bracket challenge:** A term borrowed from the NCAA March Madness, where a field of teams is paired up against one another with the winner advancing on to the next round. For DFS, this usually involves a field of players who are matched up in head-to-head contests where the winner advances until there are just two teams left. Those two teams face off in a final head-to-head matchup to declare a winner of the bracket challenge. Prizes vary for these types of contests, though payouts typically favor the last four surviving teams ("Final Four") and especially the winner.

**Bullish:** A feeling toward or liking a player or contest. The belief that a given player or team may perform well or that a contest may offer a very good payout structure would be two examples. The opposite of **bearish**.

**Buy-in:** See **entry fee**.

**Cash (verb):** To win money in a contest. E.g.: "I entered four 50/50s, and I cashed in three of them."

**Cash game:** Typically, a cash game is a contest in which at least 40% of the entrants earn a prize. For example, a 50/50 contest is considered a cash game because half the entrants win a prize, which is double the entry fee minus the site's commission.

**Ceiling:** The highest level of production within a player's range of realistic outcomes, or his best-case statistical scenario.

**Chalk:** A player considered to be a consensus pick or a "must start" option for a given DFS contest, especially in cash games.

**Commission:** The money collected by the daily fantasy sports site and kept for profit. It is sometimes referred to as a percentage of the entry fee. The percentage varies by site and contest size. A higher commission either means less money to the winners or fewer payout positions.

**Dart throw:** Also referred to as a "lottery ticket," a small investment in a player with a similarly small probability of success but particularly dynamic upside; a low-risk, high-reward investment. Dart throws are often targeted when salary cap space is heavily allocated to high-dollar players, forcing an entrant to "throw a dart" at low-priced options. (See **punt**.)

**Deposit Bonus:** The bonus you receive for making a deposit with a site.

**DFS:** An acronym for "daily fantasy sports," fantasy contests that can be run daily or weekly based on a slate of games within that time frame.

**Diversify:** To use multiple lineups and players across several DFS entries. A way to hedge bets by compiling multiple rosters with differing players.

**DPP:** Dollars per point. A player's salary divided by the number of fantasy points a player has scored, or is projected to score, in a given week. Sometimes used as a measure of value, with fewer dollars per point indicating greater value.

**Entrant:** Any person who enters a daily fantasy sports contest.

**Entry fee:** Sometimes called the "buy-in," this is the amount of money you must pay in order to enter a contest. This fee includes the commission collected by the daily fantasy sports site.

**Exposure:** Ownership of a player. The term is most commonly used as a measure of how often a particular player is rostered across several entries (e.g. "limiting one's exposure to Player X").

**Fade:** To purposely avoid exposure to a specific player or players, for any number of reasons.

**FDPs:** Stands for “FanDuel Points.” Players earn FDPs by entering real-money contests at FanDuel. You can use these points in lieu of cash to enter paid contests. If you accrue enough FDPs, you will also be eligible to enter certain monthly free play contests.

**Field size:** The number of entrants in a given DFS contest.

**Flex:** A starting position in some fantasy leagues that allows players from multiple real-life positions rather than just one. For example, a fantasy football league might allow owners to fill the Flex position with their choice of a RB, WR, or TE. There are no flex positions at FanDuel.

**Floor:** The lowest level of production within a player’s realistic range of possible outcomes; his worst-case statistical scenario. A player’s actual floor is subjective, of course, so the term is most accurately used indefinitely to describe the general neighborhood of a player’s lowest expectations.

**Free play contest:** A contest that does not require an entry fee to participate. Some free play contests offer real-money prizes to the winners, some provide free entry into other contests, others give away FanDuel Points as prizes, and some are just for fun.

**Freeroll:** See **free play contest**.

**Fish:** An inexperienced DFS player. The experienced players (“sharks”) are said to feed on fish, seeking out new and inexperienced players who may submit weak lineups.

**Full PPR:** A fantasy football scoring method where a player gets credited with one fantasy point per reception.

**Game script:** A predicted set of outcomes for a game based on a set of data like the **Vegas line**, offensive and defensive rankings, recent trends, and even team histories. The game script can help determine value for certain players based on how the game is expected to unfold. For example, a team that is expected to lose by a wide margin in a game widely expected to have a high point total might have a game script that says the quarterback is going to throw more passes than usual because he will be playing from behind early.

**Game variants:** Types of contests offered by daily fantasy sports sites. They include head-to-head contests, 50/50s, qualifiers, multipliers, and guaranteed prize pool (GPP) contests.

**GPP:** Stands for “Guaranteed Prize Pool.” It is a type of tournament for which the daily fantasy sports site promises a specific prize pool amount to be divided among the winners regardless of entry count. The prize pool is usually large (e.g. \$1 million), as is the number of entrants allowed to join. Prize structures can vary widely, but the Top 10% to 20% usually win something. These contests sometimes feature an **overlay** when the maximum number of entries is not reached.

**Grinder:** A DFS player who plays daily fantasy sports to earn a profit in any legitimate manner possible. They play often, manage their bankroll, look for +EV situations such as overlays, and look to maximize return on investment (ROI) on their DFS play at all times.

**Half PPR:** A fantasy football scoring method where a player gets credited with one-half fantasy point per reception.

**Head-to-head, H2H, or Heads-up:** A type of contest in which there are only two entrants. The winner takes the prize pool, minus the host site's commission.

**Hedge:** To offset potential losses by also wagering on an opposing outcome. For example, a DFS player who plays a semi-injured wide receiver with unknown playing status in one contest might play his backup in another to mitigate risk.

**High stakes contests:** Contests with relatively high entry fees, often \$100 or more.

**Highly experienced player (HEP) badges:** Icons next to player names identifying their experience levels. See Section 2.5.2.

**Late swap:** An option on some DFS sites to swap out a player in a lineup after the contest has started, but before that player's game has started. FanDuel does not allow late swaps.

**Large-field contest:** A contest that permits an unusually large or unlimited number of entrants to join.

**Lean:** A short-term preference toward a given player, lineup, or contest. A lean may represent a DFS player's favored choice between two or more players, such as leaning toward Player X over Player Y. A lean can also reflect an existing fondness for a particular lineup or contest, as in leaning toward Lineup A over Lineup B or Contest 1 over Contest 2.

**Lineup lock:** The time at which an entire lineup can no longer be changed. Sites that allow late swaps lock in only those players whose games have started

**Lottery ticket:** See **dart throw**.

**Minimum salary:** The lowest salary available for a particular type of positional player on a given DFS site. These numbers vary from site to site. For example, the minimum salary for a wide receiver is \$4,500 at FanDuel.

**Multi-entry, or multiple entry:** A contest that allows multiple entries by a given DFS player. The maximum number of entries allowed per player may vary among contests.

**Multi-position eligibility, or MPE:** Describes a player who is eligible to be inserted into a lineup at more than one position. For example, a WR/TE MPE player can be used as either a wide receiver or tight end.

**Multiplier:** A contest which sets its payouts as a multiple of its entry fee. For example, the winners of a 5x multiplier earn five times their entry fee.

**Over/under, or total:** Refers to the number provided by the Las Vegas casino sportsbook or other sports wagering venue that reflects the expected total score of the contest.

**Overlay:** Many daily fantasy sports sites host **guaranteed prize pool** tournaments in which a specified amount of prize money is made available to the winners. The site hopes that the entry fees from the participants will cover the prize pool. If there are too few entrants, the DFS site must contribute its own cash to cover the deficit. The deficit is known as the overlay. Overlays are highly desirable events and DFS players should target these value plays.

**Paying up:** Deliberately paying a premium to roster an expensive player who is projected to score a lot of points. DFS players who wish to roster highly regarded stud players typically must *pay up* to do so.

**Player pool:** The total population of players available to choose from for a DFS lineup at a given DFS site.

**Player prop bet:** A wager offered by a Vegas sportsbook or other sports wagering venue that is based on the performance of an individual player. For example, a prop bet for a wide receiver may be set at over/under 99.5 receiving yards. The bettor may wager that the wide receiver will gain more or fewer than 99.5 receiving yards. Prop bets are useful in DFS as an estimate of expected player performance. In the example above, a wide receiver with an over/under prop bet set at 99.5 receiving yards is projected to gain approximately 100 yards receiving in that week's game.

**PPR:** Points per reception. A fantasy football scoring method where a player scores fantasy points each time he catches a pass. Common types of PPR scoring include full PPR and half PPR.

**Prize pool:** The entire sum of money up for grabs in a daily fantasy sports contest. Except for contests with overlays, the amount of the pool is equal to the sum of the entry fees collected from the participants less the DFS site's commission.

**Pivot:** A change made to an existing DFS lineup. A pivot may be intended as a contrarian strategy to increase the uniqueness of a lineup—switching from a **chalk player** to another similarly priced player, for instance—or to account for a late player injury or deactivation.

**Punt:** To disregard production at one position or statistic in order to allocate higher spending to another. An entrant might opt to roster top-salaried players at a few positions while entrusting others to extremely low-cost options.

**Qualifier:** A contest in which the winners earn a seat at a future contest, typically one with a relatively high entry fee. See also **satellite**.

**Quintuple Up:** A particular type of DFS contest or tournament where the winners are awarded a flat prize of five times their entry fee. This quintuples their initial investment, hence the *quintuple-up* or *5x* reference to these types of games. The lineup typically must finish in the top 18% of the field to win the prize.

**Rake:** See **commission**.

**Recency bias:** The phenomenon of higher or lower ownership that follows after a given player has performed dramatically well or poorly in recent weeks.

**Reach:** In season-long fantasy football, to draft a player considerably earlier than he was expected to be drafted. In an auction, to bid considerably beyond a player's widely accepted value. In DFS, to roster a player who is unlikely to meet or exceed the level of production implied by his salary.

**Regression to the mean:** For DFS purposes, regression to the mean is the tendency for a player's weekly production to approach the weekly average of his projected yearly production over the course of a season. For example, an established wide receiver who averages six touchdowns per season will tend to "regress to the mean" after scoring three touchdowns in one game.

**ROI:** Stands for return on investment. It's generally expressed as either an absolute profit amount or profit percentage:  $(\text{winnings} - \text{entry fees}) / \text{entry fees}$  or  $(\text{account balance} - \text{deposit}) / \text{deposit}$ .

**Roster:** A DFS lineup (noun), or to add a player to a DFS lineup (verb).

**RotoGrinders:** A website located at <https://rotogrinders.com/> that provides information and tools for use in daily fantasy sports.

**Salary cap:** The total amount of money DFS players have at their disposal to assemble their lineups in a single DFS contest entry. All team managers have the same salary cap and they use the same player salaries to assemble their teams. The salary cap varies by site and sometimes by sport.

**Satellite:** A DFS tournament whose prize is an entry to a larger DFS tournament. Prizes are sometimes referred to as "tickets" toward the larger DFS tournament. See also **qualifier**.

**Season-long:** Fantasy contests that extend for most, if not all, of the NFL regular season. The typical season-long leagues run between weeks 1-16, though the actual number of weeks will vary by league.

**Shark:** An experienced fantasy or DFS player, usually a **grinder**, who knows how to optimize DFS lineups for cash games and tournaments. Sharks range from tough competitors to DFS experts to professionals who earn their living playing DFS.

**Single-entry:** DFS tournaments and/or contests that only permit one lineup to be entered per DFS player.

**Sleeper:** A player who has the potential to exceed his expected value in a DFS contest while remaining unlikely to be widely rostered. Strategically, sleepers help DFS players create more unique lineups and they are often considered contrarian plays. On the other hand, a sleeper who is widely discussed ("talked up") in the run-up to the contest tends to lose their uniqueness as more and more DFS players target them for their lineups.

**Spread:** Also known as the "point spread," the projected score differential in a game. See **Vegas line**.

**Stack (as a hedge):** Adding two complementary players to a DFS lineup in an attempt to raise their combined floor. For example, it may seem counterintuitive to stack the starting running backs from two teams playing each other head-to-head in an NFL game. But consider that while it is unlikely that both have huge performances in the same game, it is probable that at least one of the two posts a solid performance.

**Stack (as a high-risk, high-reward play):** Rostering 2-3 players from the same NFL team with the hope that if one player performs extremely well, then the other 1-2 players will also benefit. Stacking is normally done in tournaments as this is a high variance (i.e. "risky") way to build a roster. Typical stacks are QB-WR, QB-TE, QB-WR-WR, QB-WR-TE, and RB-DEF, although some other permutations do exist.

**Stake:** A funding process whereby an investor makes a monetary investment into a given DFS player's bankroll in exchange for a pre-determined percentage of that player's long-term winnings.

**Steps:** Similar to a Bracket Challenge, a steps format involves multiple contests. DFS players create their roster for the first step and the winners advance to the next step. This process is repeated until the prize is awarded at the final step. The steps format is similar to a satellite qualifier except this takes more than one "step" to qualify for the final tournament.

**Studs and Duds, Studs and Scrubs, or Stars and Scrubs:** The common term for a DFS lineup consisting of a mixture of star and weak players. The salaries of the star players force the other roster spots to be filled with players at or near minimum salary players, hence the “duds” label. In auction drafting, this refers to the strategy of paying for a few high-cost players, forcing owners to pay low prices for “duds” later in the draft.

**Survivor Tournament:** A multi-contest tournament format that typically attracts many entrants. A specified percentage of the highest-scoring DFS players “survive” each week to continue on to the next round. All surviving DFS players create a new roster each week until the tournament is complete. The majority of the prize pool is awarded during the final week of the tournament.

**Sweat:** To follow a friend's or acquaintance's contest with great interest in the outcome.

**Ticket:** The prize of a **qualifier** (or **satellite**) tournament. This ticket prize gives the winner an entry into a bigger tournament that would cost more to directly enter. Some tournaments are only available to DFS competitors that win a ticket to enter.

**Tier:** A grouping of players who are considered to be very similar in terms of their value. Players in a given tier should clearly provide more value than those in the next tier down and decidedly less value than the previous tier up.

**Tilt:** A slang term used to describe a period of time when a DFS player practices poor judgment with regards to bankroll management, particularly following multiple losing efforts.

**Tournament:** A DFS contest that consists of a large field of DFS competitors. The tournament can be a 50/50, multiplier (2x, 3x, 5x, etc.), or a GPP tournament.

**Train:** Entering multiple identical lineups in a tournament. This has extra risk and extra reward all at once, as the likelihood is high that all of the entries win or lose in the tournament. There is a small chance some win and some lose if the lineup score is near the cash cutoff for prize awards.

**Triple-up:** A particular type of DFS contest or tournament where the winners are awarded a flat prize of three times their entry fee. This triples their initial investment, hence the *triple-up* or *3x* reference to these types of games. The lineup typically must finish in the top 30% of the field to win the prize.

**Upside:** A term describing the upper portion of a player's realistic range of production. A **boom/bust** player has high upside by definition. Value players in cash games may also have upside, but normally somewhat less than boom/bust players. See **ceiling**.

**Value or salary multiplier:** A player's salary multiplier is often used as a measure of his weekly value in DFS contests. The salary multiplier can be calculated by dividing a player's projected fantasy points for the week by his weekly salary cap number in thousands of dollars. For example, a player would represent a 2x value on a week where he costs \$7,100 against the salary cap and is projected to score 14.2 fantasy points ( $14.2/7.1 = 2$ ). A player is said to "represent good value" if his salary multiplier is greater than the commonly accepted value threshold based on his position, the type of contest, and the DFS site.

**Value play:** A player who offers good value based on projected fantasy points in relation to his salary cap number for the week.

**Value pick:** A player who is considered to be more valuable than his salary implies. Good values can often be found among players coming off of a bad streak or a recent injury. In both cases, the players' salaries are often lower than they should be given how productive they have been throughout their careers.

**Vegas line:** Refers to the point spreads and **over/under** totals provided by the Las Vegas casino sportsbooks on each NFL game. The "point spread" in a Vegas line refers to the expected score differential of a given NFL contest, whereas the total or "over/under" reflects the expected total score of the contest.

**Viable:** A player who has a strong likelihood of achieving value for a cash game is considered a viable option for that type of lineup. Tournament lineups usually have a much longer list of viable players, as they include players who are both likely to reach value and also could have a big game under the right circumstances.

**Whale:** A DFS player who has a huge bankroll and is willing to play at any price point. These players often play a larger amount of volume each week.

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