

# Bios 6301: Final Project

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*12/12/2016*

```
test_dir('tests')
```

```
## Task 1: Finding Residuals: .....
## Task 2: Creating a League Object: .....
## Task 3: Simulating Confidence Intervals: .....
##
## DONE =====
```

```
1
```

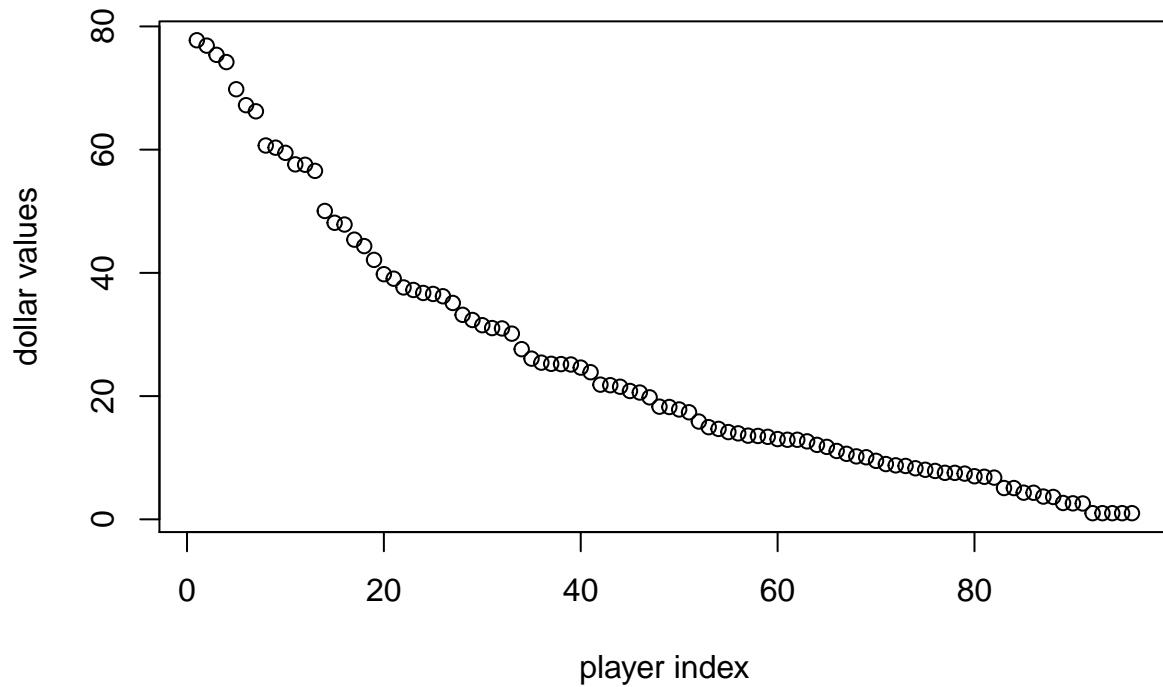
##	PlayerName	Team	position	points	value
## 142	Adrian Peterson	MIN	rb	201.420	77.751073
## 37	Cam Newton	CAR	qb	330.252	76.877855
## 470	Antonio Brown	PIT	wr	146.740	75.384163
## 143	Todd Gurley	LA	rb	198.005	74.213656
## 38	Aaron Rodgers	GB	qb	323.422	69.803021
## 472	Odell Beckham Jr.	NYG	wr	138.855	67.216511
## 144	Jamaal Charles	KC	rb	190.290	66.222098
## 471	Julio Jones	ATL	wr	132.535	60.669959
## 39	Russell Wilson	SEA	qb	314.266	60.318807
## 145	David Johnson	ARI	rb	183.780	59.478735
## 330	Rob Gronkowski	NE	te	117.450	57.609031
## 146	Lamar Miller	HOU	rb	181.915	57.546880
## 473	DeAndre Hopkins	HOU	wr	128.560	56.552467
## 40	Andrew Luck	IND	qb	304.350	50.047349
## 148	Ezekiel Elliott	DAL	rb	172.825	48.131032
## 474	Dez Bryant	DAL	wr	120.155	47.846174
## 147	Le'Veon Bell	PIT	rb	170.180	45.391217
## 475	A.J. Green	CIN	wr	116.775	44.345012
## 476	Jordy Nelson	GB	wr	114.615	42.107583
## 151	Eddie Lacy	GB	rb	164.770	39.787286
## 150	LeSean McCoy	BUF	rb	164.065	39.057014
## 41	Drew Brees	NO	qb	292.368	37.635832
## 149	Devonta Freeman	ATL	rb	162.295	37.223565
## 153	Doug Martin	TB	rb	161.830	36.741896
## 478	Allen Robinson	JAC	wr	109.280	36.581340
## 477	Alshon Jeffery	CHI	wr	108.915	36.203256
## 152	Mark Ingram	NO	rb	160.260	35.115617
## 154	Thomas Rawls	SEA	rb	158.400	33.188941
## 481	Brandon Marshall	NYJ	wr	105.195	32.349905
## 482	Sammy Watkins	BUF	wr	104.380	31.505690
## 479	Mike Evans	TB	wr	103.930	31.039559
## 480	T.Y. Hilton	IND	wr	103.875	30.982588
## 484	Brandin Cooks	NO	wr	103.055	30.133193
## 486	Randall Cobb	GB	wr	100.625	27.616085
## 331	Greg Olsen	CAR	te	87.010	26.077853
## 485	Demaryius Thomas	DEN	wr	98.515	25.430448
## 483	Keenan Allen	SD	wr	98.330	25.238817

## 155	C.J. Anderson	DEN	rb	150.680	25.192204
## 332	Jordan Reed	WAS	te	86.095	25.130053
## 42	Ben Roethlisberger	PIT	qb	279.808	24.625595
## 487	Amari Cooper	OAK	wr	97.015	23.876678
## 490	Doug Baldwin	SEA	wr	95.070	21.861956
## 491	Kelvin Benjamin	CAR	wr	94.980	21.768730
## 489	Eric Decker	NYJ	wr	94.740	21.520126
## 488	Jeremy Maclin	KC	wr	94.075	20.831288
## 1	Stephen Gostkowski	NE	k	154.000	20.577506
## 158	Carlos Hyde	SF	rb	145.470	19.795441
## 159	Jonathan Stewart	CAR	rb	144.010	18.283105
## 43	Carson Palmer	ARI	qb	273.634	18.230277
## 157	Latavius Murray	OAK	rb	143.575	17.832512
## 494	Michael Floyd	ARI	wr	90.740	17.376739
## 495	Julian Edelman	NE	wr	89.285	15.869582
## 493	Jarvis Landry	MIA	wr	88.405	14.958037
## 4	Justin Tucker	BAL	k	148.300	14.673179
## 496	Larry Fitzgerald	ARI	wr	87.635	14.160434
## 162	Jeremy Hill	CIN	rb	139.830	13.953265
## 333	Delanie Walker	TEN	te	74.945	13.580360
## 2	Mason Crosby	GB	k	147.200	13.533747
## 492	Golden Tate	DET	wr	86.890	13.388729
## 334	Travis Kelce	KC	te	74.410	13.026182
## 3	Steven Hauschka	SEA	k	146.600	12.912239
## 497	Jordan Matthews	PHI	wr	86.430	12.912239
## 156	Matt Forte	NYJ	rb	138.575	12.653277
## 160	DeMarco Murray	TEN	rb	138.030	12.088741
## 44	Eli Manning	NYG	qb	267.384	11.756234
## 498	DeSean Jackson	WAS	wr	84.675	11.094328
## 5	Graham Gano	CAR	k	144.400	10.633376
## 45	Philip Rivers	SD	qb	265.898	10.216965
## 46	Blake Bortles	JAC	qb	265.760	10.074019
## 6	Chris Boswell	PIT	k	143.300	9.493944
## 500	Donte Moncrief	IND	wr	82.625	8.970842
## 335	Gary Barnidge	CLE	te	70.290	8.758493
## 7	Dan Bailey	DAL	k	142.500	8.665267
## 501	John Brown	ARI	wr	81.965	8.287183
## 9	Josh Brown	NYG	k	141.900	8.043759
## 499	Emmanuel Sanders	DEN	wr	81.545	7.852127
## 336	Coby Fleener	NO	te	69.120	7.546552
## 337	Antonio Gates	SD	te	69.115	7.541373
## 8	Chandler Catanzaro	ARI	k	141.300	7.422251
## 161	Matt Jones	WAS	rb	133.110	6.992374
## 10	Blair Walsh	MIN	k	140.800	6.904327
## 502	Allen Hurns	JAC	wr	80.500	6.769667
## 504	Michael Crabtree	OAK	wr	78.870	5.081237
## 503	Devante Parker	MIA	wr	78.865	5.076057
## 47	Andy Dalton	CIN	qb	260.210	4.325068
## 11	Brandon McManus	DEN	k	138.300	4.314710
## 339	Martellus Bennett	NE	te	65.400	3.693202
## 164	Ryan Mathews	PHI	rb	129.865	3.631051
## 163	Jeremy Langford	CHI	rb	128.920	2.652176
## 342	Julius Thomas	JAC	te	64.340	2.595204
## 340	Jimmy Graham	SEA	te	64.320	2.574487

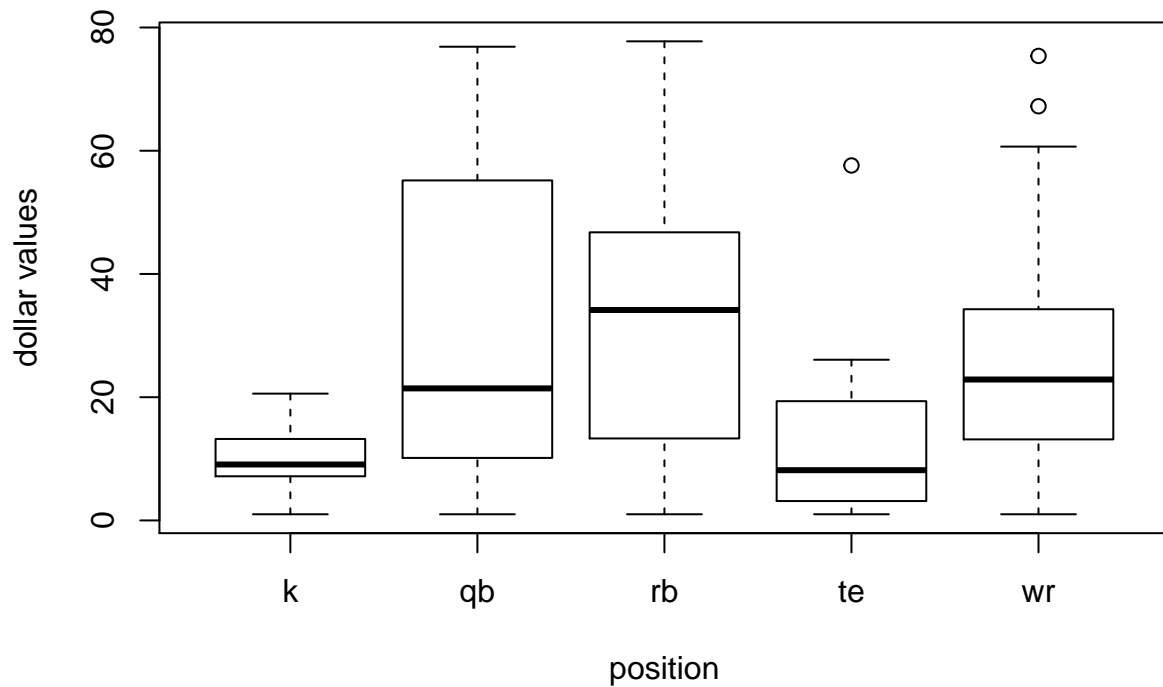
```
## 48      Tyrod Taylor  BUF      qb 257.000  1.000000
## 12      Adam Vinatieri  IND      k 135.100  1.000000
## 165     Frank Gore     IND      rb 127.325  1.000000
## 506     Stefon Diggs   MIN      wr  74.930  1.000000
## 338     Zach Ertz      PHI      te  62.800  1.000000
```

```
tryCatch(plot(1), error=function(e) { print('scatterplot') })
```

## Scatterplot of Dollar Values

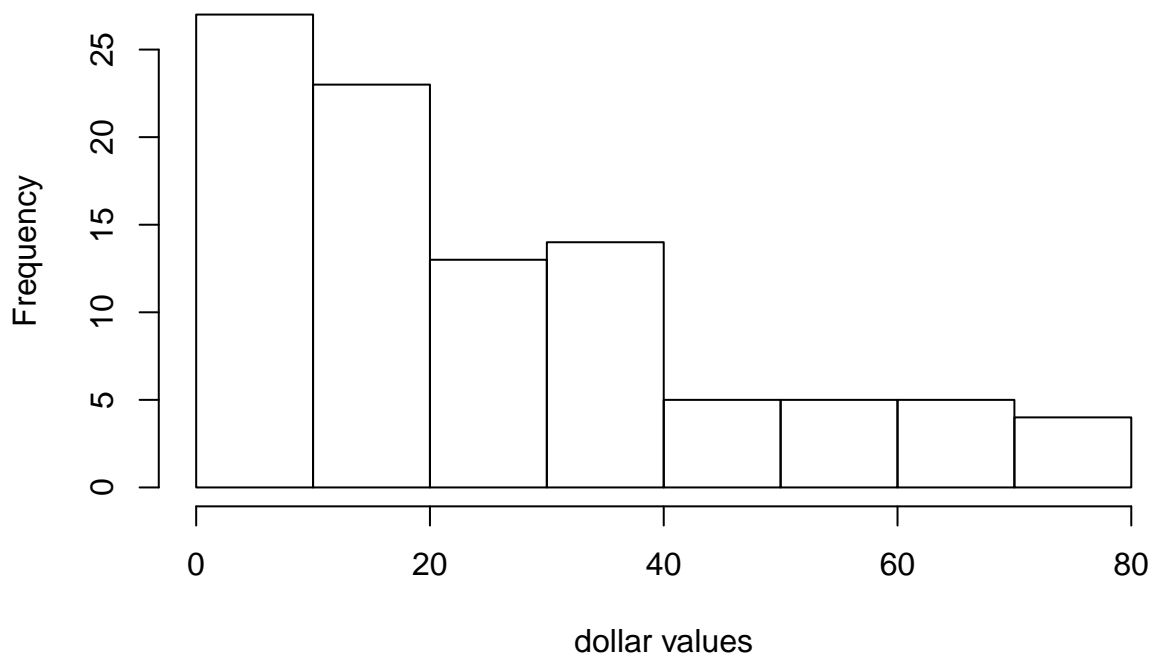


```
tryCatch(boxplot(1), error=function(e) { print('boxplot') })
```



```
tryCatch(hist(1), error=function(e) { print('histogram') })
```

## Histogram of Dollar Values



```
cls
```

```
## $qb
##           25%      50%      75%
## Cam Newton 37.544470 57.396919 73.292528
## Aaron Rodgers 29.129642 49.623649 65.228885
```

## Russell Wilson	17.641486	41.164261	55.344992
## Andrew Luck	13.753604	32.930872	48.320896
## Drew Brees	7.752477	24.747617	38.269071
## Ben Roethlisberger	0.000000	10.683160	27.389262
## Carson Palmer	0.000000	6.352019	21.525618
## Philip Rivers	0.000000	1.431193	17.880904
## Eli Manning	0.000000	1.955556	17.438122
## Blake Bortles	0.000000	1.000000	14.332847
## Andy Dalton	0.000000	0.000000	10.065866
## Tyrod Taylor	0.000000	0.000000	5.324177

##

## \$rb

##		25%	50%	75%
## Adrian Peterson	38.885781	57.077236	77.62762	
## Todd Gurley	31.299824	54.417888	73.72610	
## Jamaal Charles	21.534432	45.012562	67.02408	
## Lamar Miller	18.143160	40.181373	65.99748	
## David Johnson	15.847697	38.609609	61.88388	
## Ezekiel Elliott	4.802278	29.327998	53.25863	
## Le'Veon Bell	5.031056	26.395587	52.35760	
## Devonta Freeman	1.000000	23.580073	51.09158	
## LeSean McCoy	1.865305	24.847986	47.74753	
## Eddie Lacy	0.750000	24.436427	46.86684	
## Thomas Rawls	0.000000	19.227127	45.22438	
## Mark Ingram	1.000000	20.378112	43.67067	
## Doug Martin	0.000000	17.569938	40.58434	
## C.J. Anderson	0.000000	10.245193	35.15701	
## Carlos Hyde	0.000000	7.210038	33.64721	
## Jonathan Stewart	0.000000	6.685901	32.33973	
## Latavius Murray	0.000000	8.197988	30.48338	
## Matt Forte	0.000000	1.177864	27.77070	
## DeMarco Murray	0.000000	0.000000	24.54079	
## Jeremy Hill	0.000000	2.020985	24.30539	
## Matt Jones	0.000000	0.000000	22.47059	
## Jeremy Langford	0.000000	0.000000	15.74649	
## Ryan Mathews	0.000000	0.000000	15.14949	
## Frank Gore	0.000000	0.000000	14.39555	

##

## \$wr

##		25%	50%	75%
## Antonio Brown	49.701924	63.073365	73.36014	
## Odell Beckham Jr.	42.599865	55.411984	65.89961	
## Julio Jones	36.815533	49.182726	60.28403	
## DeAndre Hopkins	34.008102	46.601115	58.21784	
## Dez Bryant	27.595577	40.345761	51.02586	
## A.J. Green	24.185992	36.006712	47.72211	
## Jordy Nelson	21.206830	34.191134	45.43844	
## Allen Robinson	17.916092	30.640907	41.83926	
## Alshon Jeffery	16.237925	28.166269	40.32851	
## Mike Evans	14.722338	25.997367	37.80939	
## Brandon Marshall	15.451465	27.982627	37.72736	
## T.Y. Hilton	11.920920	22.892403	37.14556	
## Sammy Watkins	13.731986	25.520195	36.84337	
## Brandin Cooks	12.446399	23.389624	35.66943	

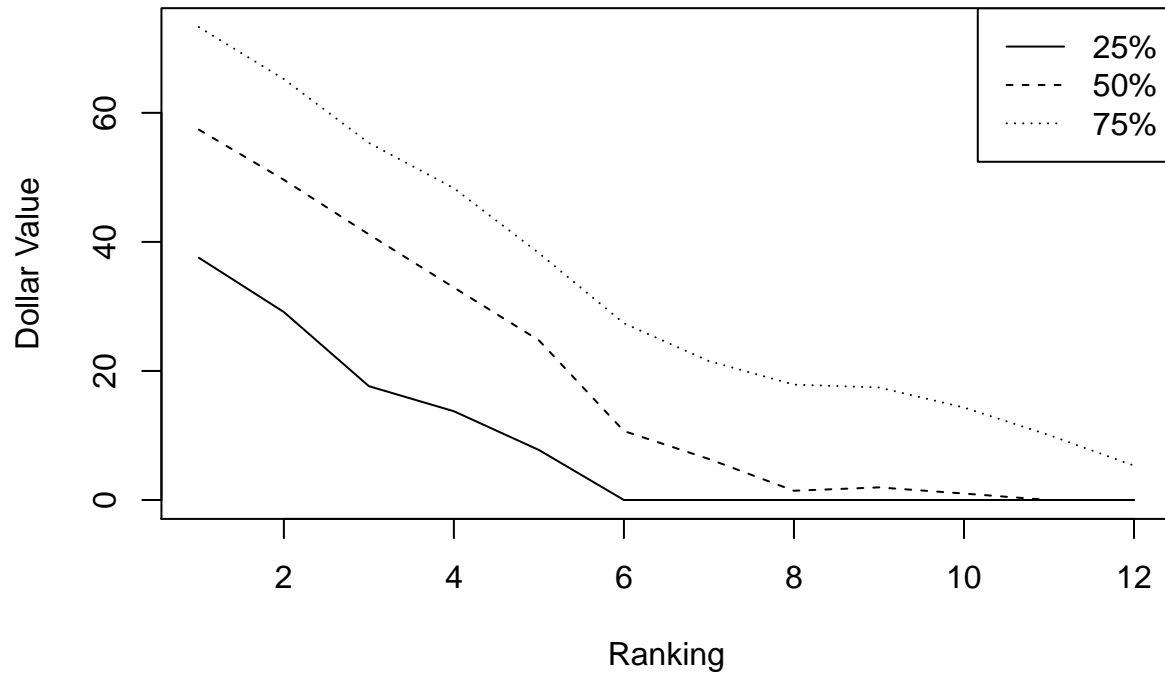
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## Randall Cobb      10.006170 23.601480 34.49256
## Demaryius Thomas  7.122687 20.913579 33.52006
## Doug Baldwin      6.646708 19.361042 30.81202
## Amari Cooper      6.039038 17.929890 30.76399
## Keenan Allen      8.319684 18.909881 30.65736
## Kelvin Benjamin   3.782224 17.956422 29.95978
## Eric Decker       7.178024 17.407580 28.32655
## Jeremy Maclin     4.513967 14.648382 27.33355
## Jarvis Landry     1.029854 12.336873 26.32674
## Julian Edelman    1.201010 13.161776 25.83489
## Michael Floyd     1.726467 14.975915 25.65561
## Golden Tate       0.000000 11.658975 22.16393
## Larry Fitzgerald  0.000000 10.964864 21.93822
## Jordan Matthews   0.000000 10.080656 20.58708
## DeSean Jackson    0.000000 10.439032 19.93040
## John Brown        0.000000  7.364434 18.41886
## Donte Moncrief    0.000000  5.433116 17.35505
## Emmanuel Sanders  0.000000  5.696079 17.02367
## Allen Hurns       0.000000  5.166100 16.35753
## Devante Parker    0.000000  2.231889 15.17891
## Michael Crabtree  0.000000  2.584179 14.71043
## Stefon Diggs      0.000000  1.367145 12.71292
##
## $te
##           25%           50%           75%
## Rob Gronkowski   39.455560 49.724578 57.281736
## Greg Olsen       11.850571 22.195718 29.936217
## Jordan Reed      10.503838 21.449177 28.936089
## Travis Kelce     1.238303 11.868314 19.106917
## Delanie Walker   1.000000 10.363698 17.871987
## Gary Barnidge    0.000000  7.313427 14.970651
## Coby Fleener     0.000000  7.862480 14.254397
## Antonio Gates    0.000000  6.821641 14.083541
## Martellus Bennett 0.000000  2.539455 10.164540
## Julius Thomas    0.000000  3.465422 10.148380
## Jimmy Graham     0.000000  2.716929  9.396035
## Zach Ertz       0.000000  1.000000  7.773891
##
## $k
##           25%           50%           75%
## Stephen Gostkowski 0 14.149112 25.691652
## Justin Tucker     0  7.474481 19.453318
## Mason Crosby       0  7.998852 18.866438
## Steven Hauschka    0  7.853749 18.496280
## Graham Gano        0  6.176708 15.702736
## Chris Boswell      0  5.237570 14.901745
## Josh Brown         0  4.518910 14.830401
## Dan Bailey         0  2.488577 14.325991
## Blair Walsh        0  3.155038 12.301011
## Chandler Catanzaro 0  1.921928 12.248931
## Brandon McManus    0  1.000000 10.960206
## Robbie Gould       0  0.000000  9.176432
##
## attr(,"class")

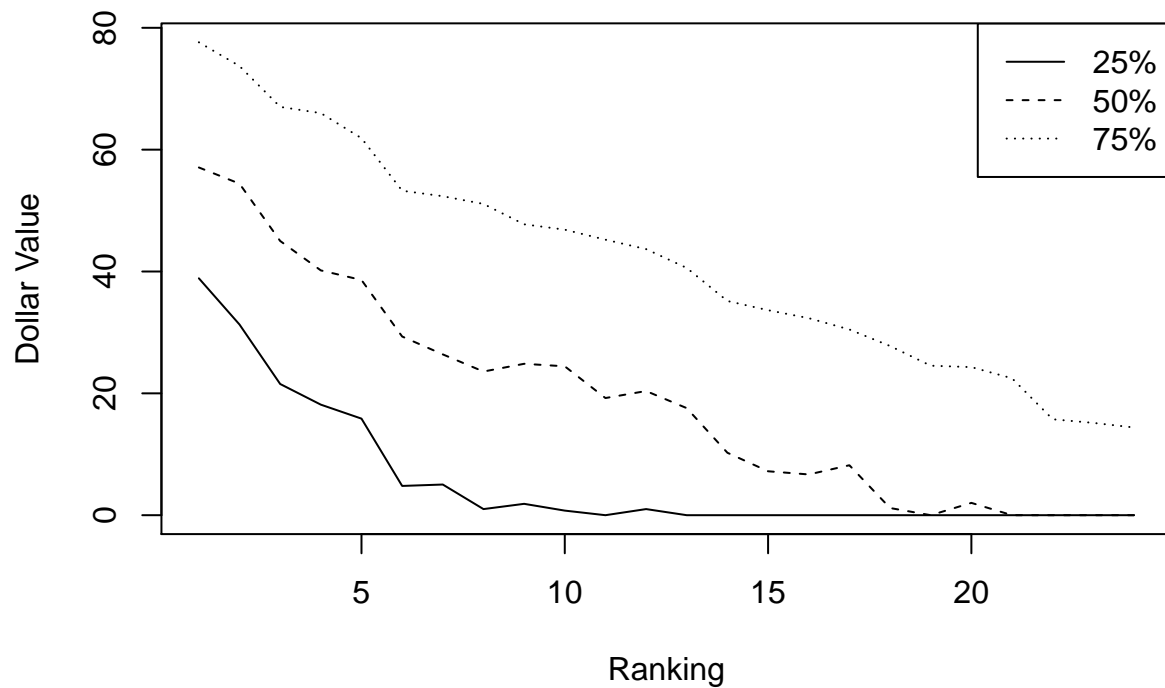
```

```
## [1] "ci.simleague"
```

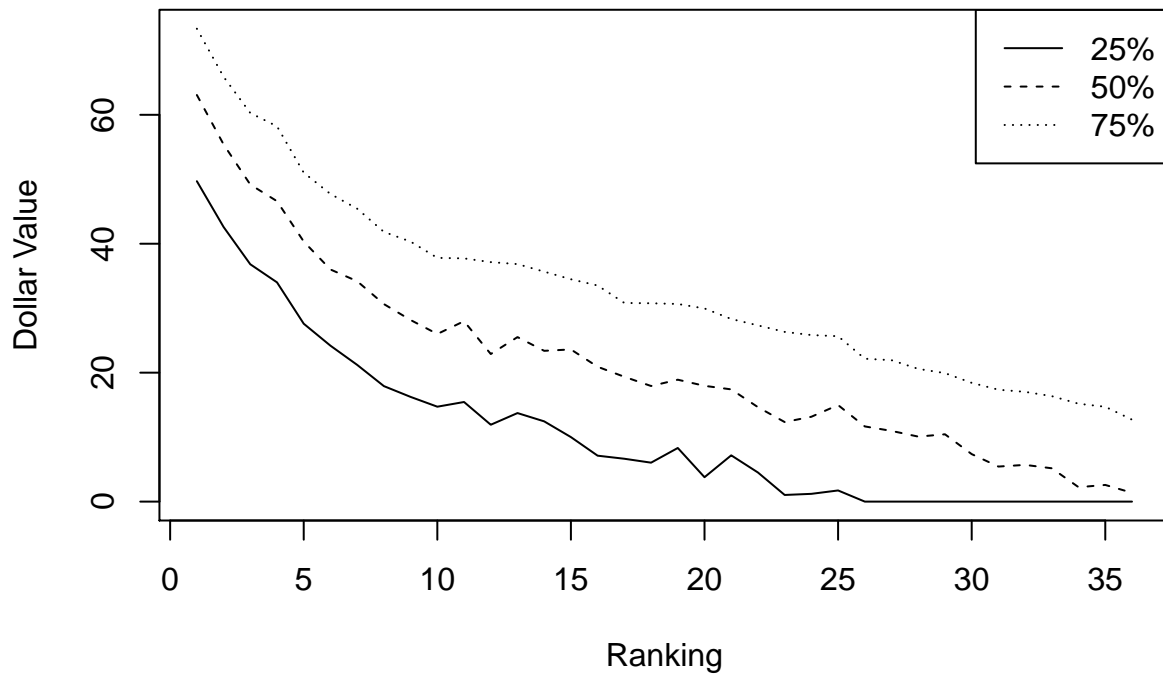
```
tryCatch(plot(cls, 'qb'), error=function(e) { print('QB-CI plot') })
```



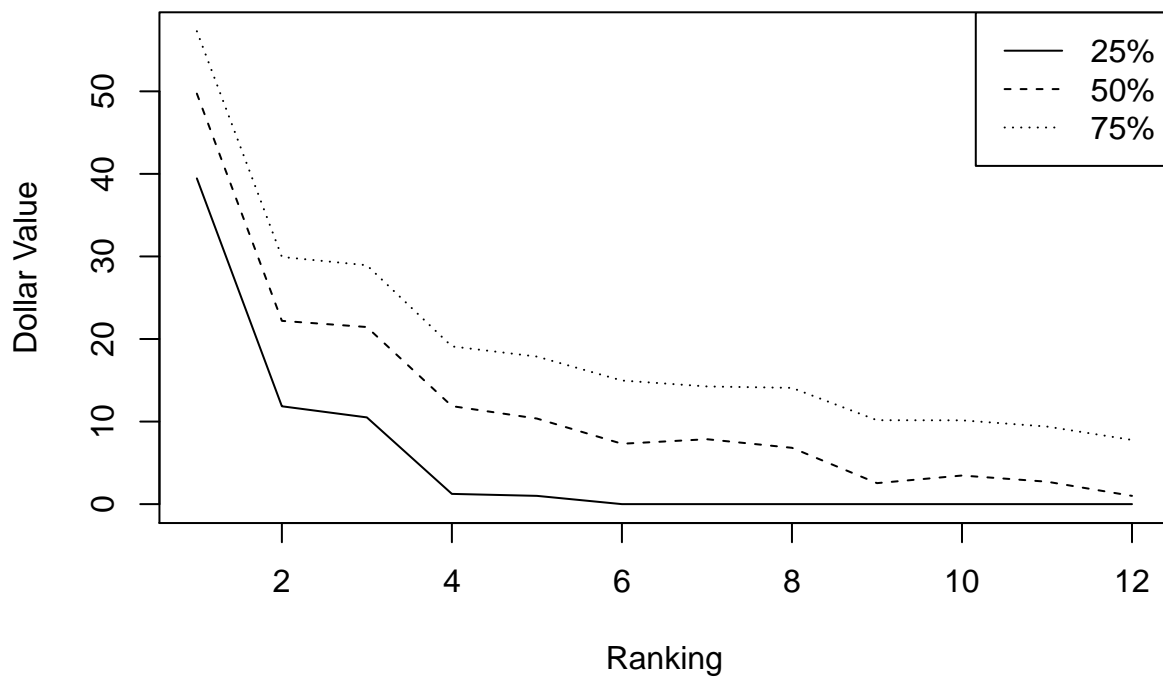
```
tryCatch(plot(cls, 'rb'), error=function(e) { print('RB-CI plot') })
```



```
tryCatch(plot(cls, 'wr'), error=function(e) { print('WR-CI plot') })
```



```
tryCatch(plot(cls, 'te'), error=function(e) { print('TE-CI plot') })
```



```
tryCatch(plot(cls, 'k'), error=function(e) { print('K-CI plot') })
```



