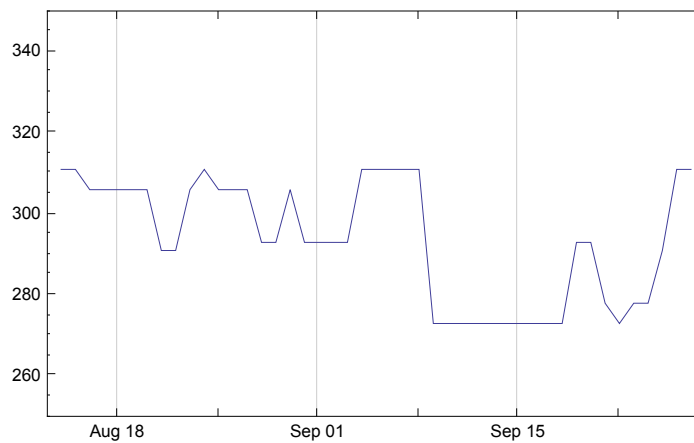```
(*Test to see if window matters (it does not) *)
```

```
window = 45; window1 = window + 1;
```

```
DateListPlot[Reverse[winning], {2008, 8, 14},
 Joined → True, PlotRange → {Automatic, {250, 350}}]
```



```
timeleft = DateDifference[DateList[][[1 ;; 3]], {2008, 11, 4}]
```

38

```
Count[sims, n_ /; n > 268] / Length[sims] // N
```
0.937

```
{Mean[sims], StandardDeviation[sims]} // N
```
{307.406, 28.1104}

```
counts = Table[Count[sims, n_ /; n == i], {i, 538}];
```
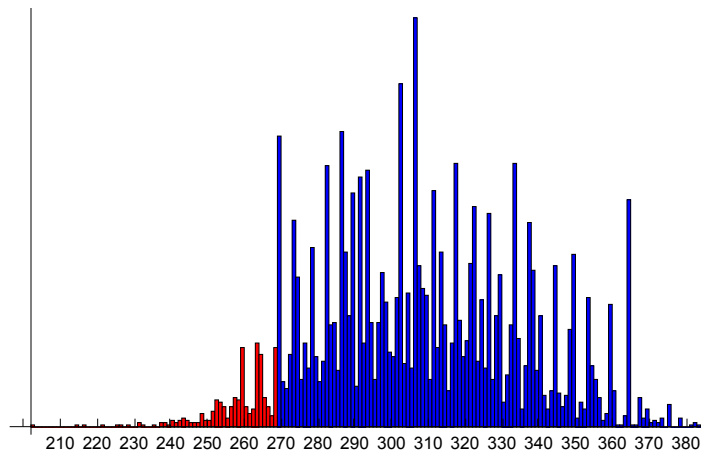
```
counts[[269]] / 5000.
```
0.0256

```
mode = Position[counts, Max[counts]][[1, 1]]
```
306

```
chanced = Table[closed[[i, -window ;; -1]] /
    (closed[[i, -window ;; -1]] + closer[[i, -window ;; -1]]), {i, 51}];
today = Total[Table[If[chanced[[i, -1]] > .5, ev[[2 ;; -2, 2]][[i]], 0], {i, 51}]]
```
311

```
counts[[today]] == mode
  (*Everything breaking exactly like today is the mode of the distribution*)
```
False

Show[hr, hd, PlotRange → {{200, 380}, {0, Max[counts]}}]

{Table[i, {i, 250, 310}],
Table[Count[sims, n_ /; n == i], {i, 250, 310}]} // MatrixForm // N

$\begin{pmatrix} 250. & 251. & 252. & 253. & 254. & 255. & 256. & 257. & 258. & 259. & 260. & 261. & 262. & 263. & 264. & 265 \\ 3. & 7. & 12. & 11. & 9. & 4. & 9. & 13. & 12. & 35. & 9. & 6. & 8. & 37. & 32. & 13 \end{pmatrix}$

Table$\left[$Count[sims, n_ /; n > i]$\Big/$Length[sims], {i, 229, 339, 10}$\right]$ // N

{0.9986, 0.9968, 0.9908, 0.9678, 0.9114,
 0.8274, 0.6996, 0.5902, 0.4458, 0.34, 0.2302, 0.1396}

Table$\left[$Count[sims, n_ /; n - 10 < i < n]$\Big/$Length[sims], {i, 229, 339, 10}$\right]$ // N

{0.0016, 0.0054, 0.016, 0.0308, 0.0778,
 0.1072, 0.1028, 0.1328, 0.0996, 0.0964, 0.0856, 0.0478}

chanced = Table$\left[$closed[[i, -window ;; -1]]$\Big/$
$\left($closed[[i, -window ;; -1]] + closer[[i, -window ;; -1]]$\right)$, {i, 51}$\right]$;

Extract[chanced[[All, -1]], Position[chanced[[All, -1]], n_ /; .3 < n < .7]] // N

{0.679321, 0.44, 0.39, 0.502, 0.54, 0.435, 0.501, 0.55}

Extract[detailIDdr[[1]], Position[chanced[[All, -1]], n_ /; .3 < n < .7]]

{CO, FL, IN, NV, NH, NC, OH, VA}

swingev = Extract[ev[[2 ;; -2, 2]], Position[chanced[[All, -1]], n_ /; .3 < n < .7]]

{9, 27, 11, 5, 4, 15, 20, 13}

Total[swingev]

104

swingevD =
 Total[Extract[ev[[2 ;; -2, 2]], Position[chanced[[All, -1]], n_ /; .5 < n < .7]]]

51

```mathematica
swingevD / Total[swingev] // N
```

0.490385

```mathematica
detailIDdr[[1, {36, 39}]]
chanced[[{36, 39}, -1]] // N
ev[[2 ;; -2, 2]][[{36, 39}]]
```

{OH, PA}

{0.501, 0.72}

{20, 21}

```mathematica
Correlation[returnsc[[36]], returnsc[[39]]]
```

0.429625

```mathematica
ohpa = Table[Switch[Total[simsdet[[i, {36, 39}]]],
    0, "Neither", 20, "OH", 21, "PA", 41, "Both"], {i, 5000}];
```

```mathematica
Count[ohpa, "PA"] / 50.
100 chanced[[39, -1]] ( 1 - chanced[[36, -1]])
```

48.04

35.928

```mathematica
Count[ohpa, "OH"] / 50.
100 chanced[[36, -1]] ( 1 - chanced[[39, -1]])
```

0.24

14.028

```mathematica
Count[ohpa, "Both"] / 50.
100 chanced[[39, -1]] chanced[[36, -1]]
```

50.

36.072

```mathematica
Count[ohpa, "Neither"] / 50.
100 ( 1 - chanced[[39, -1]]) ( 1 - chanced[[36, -1]])
```

1.72

13.972

```mathematica
(*Very little chance of winning Ohio but not Pennsylvania.  Probabilities
   very different from if OH & PA were independent*)
```

```mathematica
chanced = Table[closed[[i, -window ;; -1]] /
    (closed[[i, -window ;; -1]] + closer[[i, -window ;; -1]]), {i, 51}];
```

```
sbys = {Table[Count[simsdet[[All, i]], n_ /; n > 0] / Length[simsdet], {i, 51}] // N,
   detailIDdr[[1]], chanced[[All, -1]] // N} // MatrixForm
```

$$\begin{pmatrix} 0.0054 & 0.0492 & 0. & 0.0008 & 1. & 0.9638 & 0.9972 & 1. & 0.9868 & 0.2908 & 0.008 & 1. \\ AL & AK & AZ & AR & CA & CO & CT & DC & DE & FL & GA & HI \\ 0.06 & 0.06 & 0.07 & 0.08 & 0.931 & 0.679321 & 0.91 & 0.97 & 0.93 & 0.44 & 0.099 & 0.977 \end{pmatrix}$$

```
Table[Extract[sbys[[1, i]], Position[sbys[[1, 1]], n_ /; .05 < n < .95]], {i, 3}] //
 MatrixForm
```

$$\begin{pmatrix} 0.2908 & 0.3146 & 0.8526 & 0.502 & 0.6678 & 0.3962 & 0.5024 & 0.6664 & 0.9474 \\ FL & IN & MN & NV & NH & NC & OH & VA & WI \\ 0.44 & 0.39 & 0.732 & 0.502 & 0.54 & 0.435 & 0.501 & 0.55 & 0.728 \end{pmatrix}$$