

# Using a Gaming Site to Teach Campaign Strategies in the 2012 US Presidential Election

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**ABSTRACT** During the six weeks before the 2012 elections, we conducted a contest for the 54 students enrolled in an upper-division political science course on campaigns and elections. We modified and improved on a similar contest conducted by the first-named author (Abramson 2010) during the 2008 election campaign. Using contract prices posted by Intrade.com, an electronic gaming market in Dublin, we asked students to choose among 10 political outcomes. The contest was designed to help students learn about campaign strategies, understand how electoral rules affect political outcomes, and encourage them to talk about the campaign. We discuss ways we improved on Abramson's 2008 contest and show that student participation increased substantially.

In 2008 the first-named author of this article (Abramson 2010) developed a contest in his upper-division course "Campaigns and Elections" to teach students about the dynamics of the presidential election. Although using a gaming site to teach about elections was innovative, the low participation rate was a problem. Although a \$200 prize was offered and no entry fee was required, only 27 of the 72 students participated, 38%. His contest, like ours, focused on winning states because gaining 270 electoral votes is the key to a winning presidential strategy (Huang and Shaw 2009; Shaw 2006).

The rules for Abramson's contest are available in his article (2010, 142) as is a copy of the entry form (2010, 143–44). Although his article is available online,<sup>1</sup> we briefly summarize his rules: students were asked to choose the party to win the presidency, the number of electoral votes the Democratic presidential candidate would win, the number of electoral votes the Republican presidential candidate would win, the party that would win the presidential election in Colorado, Florida, Michigan, Ohio, and Virginia, the party to control the House after the 2008 election, and the party to control the Senate after the 2008 election. The payoff for each prediction was based on the Intrade bid price as of September 24, 2008, and the student with the most contracts won a \$200 prize.

As with Abramson's 2008 contest, ours was conducted at Michigan State University, a large public university with more than

45,000 students and a 73% acceptance for admission rate. Like his contest, ours was conducted during the final six weeks of a presidential campaign. It was basically the same course taught in 2008. Like his contest, no entry fee was charged and students' participation or how well they did had no bearing on their grades. Like Abramson's 2008 contest we used Intrade.com trading prices as the basis of our contest.

Like Abramson's 2008 contest our main goal was to teach students the importance of developing electoral vote strategies. There are many ways to do this, but we decided to replicate Abramson's contest to provide a financial incentive for students to understand this logic.

Intrade was a gaming site that acted as a clearinghouse for bettors by establishing a market for buying or selling contracts on whether future events will occur. It provided a good method for assessing the "subjective probability" of future events (Abramson, Aldrich, and Rohde 2007, 312–20; 2010, 298–303; 2012, 336–41). Intrade derived its profits by charging fees for transactions.

Our contest rules and our entry form are shown in the Appendix. We introduced seven changes to increase student participation.

First, the entry form was reconfigured. The entry form for the contest and the rules were provided on one form, whereas Abramson's 2008 contest had one form with the rules and a second for entering the contest. The students' goal was to win as many contracts as possible, and the number of contracts was determined by how many contracts \$50 would earn on each event.<sup>2</sup>

Second, we selected five winners instead of one. The first-place winner received \$200, the second- and third-place winners each received \$100, and the fourth and fifth place winners each received \$50. The total prize money increased from \$200 to \$500.

Third, Abramson had only one way for students to enter his contest. Students had to open a Word file and fill in their choices.

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We provided three ways for students to enter: they could use the web application ANGEL, a system widely used at Michigan State University; they could fill out a paper-and-pencil questionnaire; or they could open up a Word file and fill in their entries.<sup>3</sup> Not one student used this last method and only 10 of the 37 students who entered our contest used the paper-and-pencil questionnaires. As the Appendix shows, using the web application made it extremely easy for students to indicate their selections.

Fourth, a discussion of the changing dynamics of the presidential contest was an integral part of the course. We asked students to watch all three presidential debates and the vice-presidential

strictly appropriate when comparing real populations, the difference between 2012 (69%) and 2008 (38%) would occur by chance less than one time in a thousand.<sup>6</sup>

We warned students that gambling on Intrade might not be legal for Americans, and on November 26, 2012, Intrade announced that it was no longer allowing US residents to buy or sell contracts. Moreover, Intrade ran into legal troubles in Ireland and is not currently buying or selling contracts.

To further encourage participation we sent students Intrade probabilities for which party would win the presidency and for every event in our contest at least once a week between September 30 and

## *We asked students to watch all three presidential debates and the vice-presidential debate and to discuss the way each debate may have changed the dynamics of the presidential contest.*

debate and to discuss the way each debate may have changed the dynamics of the presidential contest. The first presidential debate shifted the perceived probabilities of the outcome, and President Obama never returned to the strong position he held when our contest began.

Fifth, students could directly access seven websites and Nate Silver's Five Thirty Eight blog by using the course website. These links were:

- To find the most recent Intrade probabilities, students could go to <http://www.intrade.com>
- For a link to the Iowa Electronic Markets (IEM),<sup>4</sup> students could go to <http://tippie.uiowa.edu/iem/markets/pres12.html>
- For a link to Five Thirty Eight, students could go to <http://www.fivethirtyeight.com>
- For [pollingreport.com](http://www.pollingreport.com), students could go to [www.pollingreport.com](http://www.pollingreport.com)
- For [Real Clear Politics.com](http://www.realclearpolitics.com), students could go to <http://www.realclearpolitics.com>
- For polls published in *The HuffPost Pollster*, students could go to [www.pollster.com](http://www.pollster.com)
- To go to *Roll Call*, students could go to [www.cqpolitics.com](http://www.cqpolitics.com)
- For Larry Sabato's *Crystal Ball*, students could go to <http://www.centerforpolitics.org/crystalball/>

Sixth, we eliminated a minor problem in Abramson's 2008 contest. The Intrade probabilities for the number of electoral votes had numerous inconsistencies in which the payoffs fell by choosing more electoral votes. This was especially true for predictions about how many electoral votes the Republican candidate would win. Abramson's 2008 contest did not eliminate these inconsistencies (2010, 133–34), whereas ours did. This simplified the students' choices.

Seventh, Abramson's 2008 contest required students to predict which party would control the US House of Representatives and which party would control the US Senate. We dropped these choices because our course focused on the presidential election, and the congressional contest was discussed only the day before the election. Moreover, after checking with the Intrade "Help Desk" we decided that the Intrade definition of Senate control differed from the conventional definition because it excluded independents who caucused with one of the parties.<sup>5</sup>

Participation in the contest increased markedly. Out of 54 students 37 entered, some 69%. Although tests of significance are not

November 5, the day before the 2012 election. We also gave them "Winner-Take-All" contract prices from the IEM, and Nate Silver's projected probabilities of the presidential outcome and his estimate of the electoral votes each candidate would win.

Intrade did not match the accuracy of Simon Jackman, a political scientist at Stanford University, who correctly predicted all 50 states and the District of Columbia. Drew Linzer, an Emory University political scientist, also predicted all 50 states and the District of Columbia, although he acknowledged that Romney had a 40% chance of winning Florida.<sup>7</sup> Neuroscientist Samuel Wang of Princeton University initially predicted all 50 states and the District of Columbia, although he moved Florida from Obama to Romney on the day of the election, noting that there was a 50-50 chance of a recount. And Nate Silver, who attained the greatest media visibility, was correct in all 51 of his presidential calls. But as the *HuffPost Pollster* (November 7, 2012) points out, all of these forecasters "worked from roughly the same underlying polling data." Intrade fared almost as well as these modelers:

For Jackman's blog, visit <http://jackman.stanford.edu/blog/>

For Linzer's blog, visit <http://votamatic.org/>

And for Wang's blog, visit <http://synapse.princeton.edu/joomla2/>

The Intrade favorite as of 6:15 p.m. Eastern Standard Time November 6, 2012, shortly before the polls closed, won in 49 of the 50 states and the District of Columbia, missing only in Florida where it gave Romney a 71.5% chance of winning, and Florida turned out to be the closest race in the nation in terms of the percentage difference between Obama and Romney. Fortunately for our contest, Obama's margin of victory was large enough to preclude a Republican demand for a recount, which could have been waived. Intrade "closed" the betting on Florida before November 12 and we were able to award the prizes to the winning students on the Monday following the election.

Intrade bettors also had access to the same data, although access to state polls on [pollster.com](http://www.pollster.com) is available only to subscribers.<sup>8</sup> But all of the websites we list previously are easily accessible and four of these make electoral vote predictions.

The main problem we encountered when our contest was launched was finding states in which the outcome was seen as close. Although the race tightened after the first presidential debate on October 3, by early November it was clear to most observers that Obama led in most battleground states. Students who went with the Intrade

odds as of September 30 would have predicted every state correctly, but they would have predicted Romney to win 210 or more electoral votes, whereas he won 206. In fact, only nine students changed their predictions, and five of them changed their choice from a Democratic win in Florida to a Republican win. Moreover, two students received the maximum possible score (70 contracts), and both were early entrants.<sup>9</sup>

After our contest was launched, each class (except for one examination day and one day to discuss congressional races) began with a discussion of the current state of the presidential campaign, viewed largely through the context of the eight battleground states chosen for our contest. Because the class met only Mondays and Wednesdays, we could not respond to events as rapidly as we liked. For example, the first presidential debate was on October 3, a Wednesday night. Between Sunday, September 30, when our contest began and Sunday, October 7, the day before our class met after the debate, the subjective probabilities for the Democrats to win the presidency fell from 78.5% to 64.0%. As our contest was based on Intrade, we always discussed the changing Intrade contract prices. But we also discussed the *HuffPost Pollster* projections because they presented a color-coded map and classified each state as “Strong Obama,” “Leans Obama,” “Strong Romney,” “Leans Romney,” and “Toss-Up.” Although the *HuffPost Pollster* often moved Ohio from “Toss-Up” to “Leaning Obama” and back to “Toss-Up,” it wound up classifying the Buckeye State as “Leaning Obama.” We also referred to Silver’s blog, which gave the Democrats a far better chance of winning than Intrade. We strongly encouraged students to contribute to these discussions. Having money at stake may have increased student interest, especially as most students lived in Michigan, and neither campaign put much time or effort into winning Michigan.

As the campaign progressed it became clear that Nevada was no longer in contention. Moreover, Romney’s efforts to win Pennsylvania, which had voted Democratic in all five elections between 1992 and 2008, and his attempts to win Wisconsin, which had voted consistently Democratic between 1988 and 2008, seemed to be signs

entered were better students who were more interested in the material.<sup>11</sup> However, among the 37 students who entered the contest, no relationship between success in the contest and student grades is seen. In any event, we cannot demonstrate that entering the contest actually achieved the goal of teaching students about Electoral College strategies, although between October 1 and October 31 we began nine classes by discussing the contest.

In terms of generating participation, our contest appears to have been much more successful than Abramson’s 2008 contest, as the participation rate increased from a disappointing 38% to a more respectable 60%. We cannot prove that changes in the contest rules led to increased participation. Moreover, we made seven changes to his contest, and, even if changes led to increased participation we do not know which change had the greatest effect. Given the relatively small size of the class, it was not feasible to conduct experiments among randomly chosen subgroups within the class.<sup>12</sup> Teaching the course in different sections would have allowed us to vary the rules, but the first-named author did not have the authority to offer additional sections of the course. However, we think that two changes were the most consequential. First, increasing the number of winners (and the total prize money) may have persuaded more students to enter. Second, using a computer application may have made it easier to participate. We especially think this is the case because not one student used the Word file to enter the contest, whereas this was the only way to enter Abramson’s 2008 contest.

The most important factor determining student interest in a campaign is the campaign itself. There is little reason to believe that the 2012 campaign generated more interest than the 2008 contest. Although Obama’s popular vote margin of victory fell from 7.2% to 3.9%, which might be expected to increase turnout (Aldrich 1993; Ashenfelter and Kelley 1975; Cox 1988), the percentage of the politically eligible population that voted fell 3.4%.<sup>13</sup> In Michigan turnout fell 4.5%. Moreover, few pundits saw Michigan as competitive in either 2008 or 2012. In 2008, both presidential candidates visited Michigan State University during the presidential campaign

*“[C]ampaign strategies go out of date much faster than maps because any hour can bring changes in the political landscape that made once-minor features critical and once-important features irrelevant. The features to exaggerate and the features to minimize in a political strategy are only partially predictable.”*

of his weakening position in Ohio.<sup>10</sup> Romney’s shifting electoral vote goals provide support for the wisdom offered by Samuel L. Popkin (2012, 46), “[C]ampaign strategies go out of date much faster than maps because any hour can bring changes in the political landscape that made once-minor features critical and once-important features irrelevant. The features to exaggerate and the features to minimize in a political strategy are only partially predictable.”

Although it was difficult to analyze the shifting strategies of the campaigns during the heat of the 2012 campaign, and although the importance of Obama’s ground game (Alter 2013, 256–68) or his improved media strategy (Rutenberg 2013) were not clear until after the election, our 2012 contest may have helped generate student interest in the presidential election. The 37 students who entered the contest had substantially higher grades (a mean grade of 3.01,  $sd = 0.87$  on a 0.0 to a 4.0 scale) than the 17 who did not (a mean grade of 2.35,  $sd = 1.47$ ), but this might be because students who

(John McCain during the primaries and Obama during the general election campaign), whereas neither candidate visited our campus in 2012. Moreover, Steven J. Rosenstone and John Mark Hansen (1993, 183) estimate that the move away from holding gubernatorial elections during presidential years contributed to the overall decline of turnout in US presidential elections since World War II. In 2008 and 2012 only 11 states held simultaneous presidential and gubernatorial elections. Michigan was among the 39 that did not. Moreover, in Michigan in both 2008 and 2012 an incumbent Democratic senator faced little opposition. Carl Levin won by 22.7 percentage points over his Republican opponent in 2008, and Debbie Stabenow won by a 20.8 point margin over her Republican challenger in 2012. Therefore, we do not believe that factors exogenous to changes in our contest led to the increase in student participation.

It seems extremely unlikely that Intrade will be available for predicting future elections. All the same, other websites and blogs

predicting the US election outcomes are available, and they also provide important tools for generating student interest and understanding of US elections. As Justin Wolfers, a professor of economics and public policy at the University of Michigan, said shortly after Intrade announced it would no longer accept bets from US residents, “There’s a very large and active market on U.S. political outcomes, and that’s not going to go away.” (Trindle, November 27, 2012, B2). In fact, Paddy Power, based in Ireland, is already taking bets on the 2016 US presidential election (visit [http://www.paddypower.com/bet/politics/other-politics/us-politics?ev\\_oc\\_grp\\_ids=791149](http://www.paddypower.com/bet/politics/other-politics/us-politics?ev_oc_grp_ids=791149)). The easiest way to find these odds is to go to [paddypower.com](http://paddypower.com), go to A to Z BETTING, go to Politics, and go to US Politics.)

As of November 2013, Paddy Power was offering bets on the candidate to win the Democratic presidential nomination, the candidate to win the Republican presidential nomination, the party to win the presidency, and the candidate to win the presidency. Although Paddy Power does not accept bets from the United States, its odds are readily available to anyone with Internet access.<sup>14</sup> Moreover, [paddypower.com](http://paddypower.com) provides 28 bets on UK politics, 19 on Irish politics, and three on Scottish politics. Although these bets are of little interest to American students, our colleagues in Britain, Ireland, and Scotland may find them useful in their classes.

Although using a gaming site has the advantage of introducing students to the concept of probabilities, thus making predictions more difficult, Intrade was widely followed by journalists writing about the 2008 and 2012 elections. Paddy Power was not. However, instructors can run a contest without using a gaming site. Numerous websites predict state-by-state outcomes, and instructors could design a simpler contest in which students predicted the presidential results in all 50 states and the District of Columbia, a limited number of battle ground states, or only the total number of electoral votes that each party will receive. Such a contest might lead to more student participation than ours did.

## ACKNOWLEDGMENTS

We are grateful to Alan I. Abramowitz, Lee J. Abramson, Cali Mortenson Ellis, Abraham Diskin, and Brian D. Silver for advice on conducting the contest. Abraham Diskin, Ryan C. Black, Dan Felsenthal, Scott Gates, Matt Grossmann, Melinda Gann Hall, Indridi Indridason, Steven Kautz, Drew Linzer, Michael C. Mungger, Charles W. Ostrom, Jr., Samuel S. Wang, and Christopher Wlezien made helpful suggestions on earlier drafts of this article, as did the anonymous reviewers for this journal. ■

## NOTES

1. The easiest way to access Abramson’s article is to go to the following site: <http://dx.doi.org/10.1017/S1049096510990707>. It is also available on JSTOR.
2. Intrade did not allow bettors to buy or sell fractions of contracts, but we simplified our contest by rounding.
3. Although there are many web-based tools, we chose ANGEL because undergraduates at our university are familiar with this system. For a comparison of alternative systems, see Wright (2005).
4. The IEM is also a well-known trading site. However, it has only two presidential contracts: one on the total share of the vote each major-party candidate will receive and the other on which candidate will win a majority of the major-party vote. But, as the 2000 election demonstrates, a candidate can win a majority of the major-party vote and lose the election. Erikson and Wlezien (2012) argue that since the advent of scientific polling, prediction markets fare no better than public opinion polls. Their critique focuses on the IEM. For a positive assessment of the IEM, see Berg et al. (2008).

5. The Intrade definition of Senate control took the vice-presidency into account, but as it seemed likely that there would be two independents in the 113th Congress who would caucus with the Democrats, Intrade exaggerated the probability of no party controlling the Senate and underestimated the probability of Democratic control.
6. This is true whether one uses a  $X^2$ , the  $X^2$  corrected for continuity, or the Fisher’s exact test.
7. For a discussion of his forecasting methods, see Linzer (2013).
8. The first-named author of this paper subscribed to [pollingreport.com](http://pollingreport.com) in order to be better able to provide students with information about the campaign. However, Five Thirty Eight and *The HuffPost Pollster* provided similar information with no charge.
9. The tie was broken by the date the students submitted their entries.
10. It is also possible that Romney’s strategy resulted from internal polls that led his campaign to believe he might win Pennsylvania and Wisconsin. See Alter 2013, 352–66; Scheiber (November 30, 2012). As Abramson et al. (in press, chapter 2) show, some analysts considered both Pennsylvania and Wisconsin to be battleground states.
11. To test whether there was a significant difference between the grades of students who participated in the contest and those who did not we used a t test for independent samples. The results showed a significant difference between the averages ( $t(52) = 2.063, p < .05$ ).
12. For an example of a quasiexperimental study using prediction markets, see Ellis and Sami (2012).
13. We report turnout results based upon estimates presented by Michael P. McDonald. His site is <http://elections.gmu.edu>
14. Paddypower posts its bets in terms of odds, whereas Intrade posted its odds in terms of probabilities. Paddypower is not yet posting odds on states, but it did post such odds in 2012.

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## APPENDIX: 2012 Election Contest (Rules and Entry Form)

Political Science 334, Section 001

Campaigns and Elections

Professor Paul R. Abramson

2012 Election Contest (Rules and Entry Form)

**You have \$500 in virtual money.**

**By entering this contest you can win \$200, \$100, or \$50 in real money!**

**There will be five winners.**

Since August 5, I have been sending you contract prices for the upcoming elections based upon Intrade.com and the Iowa Electronic Markets. You will continue to receive these probabilities through November 5.

I am conducting this contest to give you a better idea of what these subjective probabilities mean, to help you understand the dynamics of the general election contest, and to allow you to profit from your understanding.

As a student in PLS 334, Section 001, you have \$500 in virtual money.

To enter the contest you will need to allocate your virtual \$500 for ten events: (1) the party to win the presidential election in Colorado; (2) the party to win the presidential election in Florida; (3) the party to win the presidential election in Iowa; (4) the party to win the presidential election in Nevada; (5) the party to win the presidential election in New Hampshire (6) the party to win the presidential election in North Carolina; (7) the party to win the presidential election in Ohio; (8) the party to win the presidential election in Virginia; (9) the number of electoral votes the Democratic presidential candidate will win; (10) and the number of electoral votes the Republican presidential candidate will win.

You must purchase \$50 worth of contracts for each event and must choose only one outcome for each event. I have done some rounding and show the total number of contracts that each purchase will win.

On November 12, 2012 (unless one or more of these events is undecided), I will determine how many contracts each student has won. The student with the most total contracts will win \$200, the students with the second and third largest number of contracts will each win \$100, and the students with the fourth and fifth largest number of contracts will each win \$50. The prizes will be awarded in class and students will be paid in cash.

In case of ambiguities, the winners for each event will be determined by the trading rules for Intrade.com.

In case of ties, the winner will be the student who submits his or her entry first. If you submit your entry electronically, I will automatically have the time and date of your entry. If you give me or Alon Kraitzman a hard copy of your entry, we will note the time and date of your entry when we receive it.

The value of contracts is based upon the prices listed in <http://www.intrade.com> for a \$10 contract as of 9:45:32 AM IST [Irish Standard Time], September 30, 2012.

**For this contest these prices will not change, regardless of future changes in Intrade prices.**

Your entry must be returned to me by 11:59:59 p.m. EST, Monday, November 5. You may submit as many entries as you wish, but only your last entry will count.

*Notes:*

The Intrade prices for the number of electoral votes eliminate inconsistencies in the Intrade contract prices. You can always win more contracts by choosing a higher number of electoral votes.

The contract price for "Any other candidate" in Virginia is artificial. Intrade has not established a contract price for this outcome.

### General Information

**1. First name**

Please enter your first name

**2. Last Name**

Please enter your last name

**3. Student ID number**

Please enter your student ID number

**Party to Win Presidential Election by States -**

Please select one option for each question

(continued)

## APPENDIX: (continued)

### 4. Presidential Election in Colorado

Party to Win Presidential Election in Colorado:

- A) Democratic - Bid Price per \$10.00 Contract: \$7.52 / Number of Contracts: 7
- B) Republican - Bid Price per \$10.00 Contract: \$2.40 / Number of Contracts: 21
- C) Any other candidate - Bid Price per \$10.00 Contract: \$0.10 / Number of Contracts: 500

### 5. Presidential Election in Florida

Party to Win Presidential Election in Florida:

- A) Democratic - Bid Price per \$10.00 Contract: \$6.91 / Number of Contracts: 7
- B) Republican - Bid Price per \$10.00 Contract: \$3.43 / Number of Contracts: 15
- C) Any other candidate - Bid Price per \$10.00 Contract: \$0.01 / Number of Contracts: 5,000

### 6. Presidential Election in Iowa

Party to Win Presidential Election in Iowa:

- A) Democratic - Bid Price per \$10.00 Contract: \$8.23 / Number of Contracts: 6
- B) Republican - Bid Price per \$10.00 Contract: \$2.95 / Number of Contracts: 17
- C) Any other candidate - Bid Price per \$10.00 Contract: \$0.05 / Number of Contracts: 1,000

### 7. Presidential Election in Nevada

Party to Win Presidential Election in Nevada:

- A) Democratic - Bid Price per \$10.00 Contract: \$8.12 / Number of Contracts: 6
- B) Republican - Bid Price per \$10.00 Contract: \$1.80 / Number of Contracts: 28
- C) Any other candidate - Bid Price per \$10.00 Contract: \$0.10 / Number of Contracts: 500

### 8. Presidential Election in New Hampshire

Party to Win Presidential Election in New Hampshire:

- A) Democratic - Bid Price per \$10.00 Contract: \$7.87 / Number of Contracts: 6
- B) Republican - Bid Price per \$10.00 Contract: \$2.10 / Number of Contracts: 24
- C) Any other candidate - Bid Price per \$10.00 Contract: \$0.05 / Number of Contracts: 1,000

### 9. Presidential Election in North Carolina

Party to Win Presidential Election in North Carolina:

- A) Democratic - Bid Price per \$10.00 Contract: \$4.20 / Number of Contracts: 12
- B) Republican - Bid Price per \$10.00 Contract: \$5.90 / Number of Contracts: 8
- C) Any other candidate - Bid Price per \$10.00 Contract: \$0.01 / Number of Contracts: 5,000

### 10. Party to Win Presidential Election in Ohio

Party to Win Presidential Election in Ohio:

- A) Democratic - Bid Price per \$10.00 Contract: \$8.23 / Number of Contracts: 6
- B) Republican - Bid Price per \$10.00 Contract: \$2.05 / Number of Contracts: 24
- C) Any other candidate - Bid Price per \$10.00 Contract: \$0.12 / Number of Contracts: 417

### 11. Presidential Election in Virginia

Party to Win Presidential Election in Virginia:

- A) Democratic - Bid Price per \$10.00 Contract: \$7.80 / Number of Contracts: 6
- B) Republican - Bid Price per \$10.00 Contract: \$2.45 / Number of Contracts: 20
- C) Any other candidate - Bid Price per \$10.00 Contract: \$0.01 / Number of Contracts: 5,000

### Electoral Votes

Please select one option for each question

### 12. Democratic presidential candidate

Number of Electoral Votes the Democratic presidential candidate will win:

- A) 180 or more - Bid Price per \$10.00 Contract: \$9.75 / Number of Contracts: 5
- B) 250 or more - Bid Price per \$10.00 Contract: \$8.87 / Number of Contracts: 6
- C) 280 or more - Bid Price per \$10.00 Contract: \$7.69 / Number of Contracts: 7
- D) 320 or more - Bid Price per \$10.00 Contract: \$6.39 / Number of Contracts: 8
- E) 330 or more - Bid Price per \$10.00 Contract: \$5.12 / Number of Contracts: 10
- F) 350 or more - Bid Price per \$10.00 Contract: \$2.75 / Number of Contracts: 18
- G) 360 or more - Bid Price per \$10.00 Contract: \$2.00 / Number of Contracts: 25
- H) 370 or more - Bid Price per \$10.00 Contract: \$1.13 / Number of Contracts: 44
- I) 380 or more - Bid Price per \$10.00 Contract: \$0.72 / Number of Contracts: 69
- J) 390 or more - Bid Price per \$10.00 Contract: \$0.50 / Number of Contracts: 100

### 13. Republican presidential candidate

Number of Electoral Votes the Republican presidential candidate will win:

- A) 130 or more - Bid Price per \$10.00 Contract: \$9.80 / Number of Contracts: 5
- B) 180 or more - Bid Price per \$10.00 Contract: \$8.30 / Number of Contracts: 6
- C) 200 or more - Bid Price per \$10.00 Contract: \$5.91 / Number of Contracts: 8
- D) 210 or more - Bid Price per \$10.00 Contract: \$5.00 / Number of Contracts: 10

(continued)

## APPENDIX: (continued)

- E) 220 or more - Bid Price per \$10.00 Contract: \$4.35 / Number of Contracts: 11
- F) 240 or more - Bid Price per \$10.00 Contract: \$2.50 / Number of Contracts: 20
- G) 280 or more - Bid Price per \$10.00 Contract: \$2.10 / Number of Contracts: 24
- H) 290 or more - Bid Price per \$10.00 Contract: \$1.50 / Number of Contracts: 33
- I) 300 or more - Bid Price per \$10.00 Contract: \$1.00 / Number of Contracts: 50
- J) 330 or more - Bid Price per \$10.00 Contract: \$0.61 / Number of Contracts: 82
- K) 370 or more - Bid Price per \$10.00 Contract: \$0.29 / Number of Contracts: 172
- L) 380 or more - Bid Price per \$10.00 Contract: \$0.28 / Number of Contracts: 179
- M) 390 or more - Bid Price per \$10.00 Contract: \$0.25 / Number of Contracts: 200