



Ipsos Poll conducted for Reuters, March 2012
Afghanistan Poll

NOTE: all results shown are percentages unless otherwise labeled.

These are findings from an Ipsos poll conducted for Thomson Reuters from March 12th – 13th, 2012. For the survey, a sample of 1,061 Americans was interviewed online. The precision of the Reuters/Ipsos online polls is measured using a credibility interval. In this case, the poll has a credibility interval of plus or minus 3.5 percentage points for all respondents. For more information about credibility intervals, please see the appendix.

The data were weighted to the U.S. current population data by gender, age, education, ethnicity and a political values scale. Statistical margins of error are not applicable to online polls. All sample surveys and polls may be subject to other sources of error, including, but not limited to coverage error and measurement error. Figures marked by an asterisk () indicate a percentage value of greater than zero but less than one half of a per cent. Where figures do not sum to 100, this is due to the effects of rounding.*

AFGHANISTAN POLL

Q1. How familiar are you with the recent incident in Afghanistan where a US soldier left his base and shot 16 Afghan civilians?

	<u>All</u>	<u>Repub</u>	<u>Dem</u>	<u>Indep</u>
Very familiar	24	25	28	20
Somewhat familiar	37	41	40	37
Not very familiar	16	16	14	20
Have heard of it, but that's it	10	9	8	10
Have not heard about it	13	9	10	13
Total familiar	61	66	68	57
Total aware	87	91	90	87

Q2. Please indicate the extent to which you agree or disagree with each of the following statements? (Select one per row)

a. The U.S. should bring home all of its troops from Afghanistan immediately.

	<u>All</u>	<u>Repub</u>	<u>Dem</u>	<u>Indep</u>
Strongly agree	35	28	39	38
Somewhat agree	26	27	26	32
Neither agree nor disagree	22	19	17	25
Somewhat disagree	11	16	14	4
Strongly disagree	5	10	4	1
Total agree	61	55	65	70
Total disagree	17	26	18	5



b. This incident in Afghanistan has made me less supportive of the United States' involvement in Afghanistan.

	<u>All</u>	<u>Repub</u>	<u>Dem</u>	<u>Indep</u>
Strongly agree	19	14	23	25
Somewhat agree	21	22	21	21
Neither agree nor disagree	40	35	38	40
Somewhat disagree	8	11	8	8
Strongly disagree	12	17	10	7
Total agree	40	36	44	46
Total disagree	20	29	18	15

How to Calculate Bayesian Credibility Intervals

The calculation of credibility intervals assumes that Y has a binomial distribution conditioned on the parameter θ , i.e., $Y|\theta \sim \text{Bin}(n, \theta)$, where n is the size of our sample. In this setting, Y counts the number of “yes”, or “1”, observed in the sample, so θ . This model is often called the likelihood function, and it is a standard concept in both the Bayesian and the Classical framework. The Bayesian¹ statistics combines both the prior distribution and the likelihood function to create a posterior distribution. The posterior distribution represents our opinion about which are the plausible values for θ adjusted after observing the sample data. In reality, the posterior distribution is one’s knowledge base updated using the latest survey information. For the prior and likelihood functions specified here, the posterior distribution is also a beta distribution ($\pi(\theta/y) \sim \beta(y+a, n-y+b)$), but with updated hyper-parameters.

Our credibility interval for θ is based on this posterior distribution. As mentioned above, these intervals represent our belief about which are the most plausible values for θ given our updated knowledge base. There are different ways to calculate these intervals based on . Since we want only one measure of precision for all variables in the survey, analogous to what is done within the Classical framework, we will compute the largest possible credibility interval for any observed sample. The worst case occurs when we assume that $a=1$ and $b=1$ and . Using a simple approximation of the posterior by the normal distribution, the 95% credibility interval is given by, approximately:

$$= \dots$$

For the poll published on March 13th, 2012, the Bayesian Credibility Interval was adjusted using standard weighting design effect $1+L=1.3$ to account for complex weighting²

Analysis Domain	Sample size	Credibility intervals
All Americans	1061	3.5%

¹ *Bayesian Data Analysis, Second Edition*, Andrew Gelman, John B. Carlin, Hal S. Stern, Donald B. Rubin, Chapman & Hall/CRC | ISBN: 158488388X | 2003

² Kish, L. (1992). *Weighting for unequal Pi*. *Journal of Official Statistics*, 8, 2, 183200.