

PROB STAT HONORS

Name _____

7.4 – BINOMIAL RANDOM VARIABLES

R. H. Bruskin Associates Market Research found that 40% of Americans do not think that having a college education is important to succeed in the business world. If a random sample of five Americans is selected, find these probabilities.

1. Exactly 2 people will agree with that statement.
2. At most 3 people will agree with that statement.
3. At least 2 people will agree with that statement.
4. Fewer than 3 people will agree with that statement.

It is reported that 77% of workers aged 16 and over drive to work alone. Choose eight workers at random. Find the probability that...

5. ...all drive to work alone.
6. ...more than one-half drive to work alone.
7. ...exactly 3 drive to work alone.

8. A survey found that 21% of Americans watch fireworks on television on July 4. Find the mean and standard deviation of the number of individuals who watch fireworks on television on July 4 if a random sample of 1000 Americans is selected.

9. Eighty-five percent of Americans favor spending government money to develop alternative sources of fuel for automobiles. For a random sample of 120 Americans, find the mean and standard deviation for the number who favor government spending for alternative fuels.