

PRECALC MATH MATTERS

“Be an Actuary”

Visit the “Be an Actuary” web site at www.beanactuary.org and answer the following questions.

Answers do not have to be written in complete sentences.

1. Select “What is an actuary?” followed by “What do we do?”

- (a) What is the primary area that actuaries manage?
- (b) List the 3 areas of expertise for actuaries.

At the right, click “The Problems Actuaries Solve.”

- (c) Describe 2 problems actuaries would solve for insurance companies.
- (d) Describe 2 problems actuaries would solve for other types of businesses.

2. Select “Why Actuarial Science.” At the right, click Salary. Scroll to down to the last paragraph and click the link to the Bureau of Labor and Statistics.

- (a) What is the median salary for actuaries?
- (b) What growth rate (percentage) is expected from 2020-2030?
- (c) Return to the “Be An Actuary” website. Click “Finding a Job” at the top and then “Jobs by Region.” What percentage of actuarial jobs are available in the Midwest according to the Casualty Actuarial Society?

3. Find the “Fast Facts About Actuaries” under the “What is an Actuary” section.

- (a) How long does it take to pass all of the actuary exams?
- (b) Do you have to pass all of the exams before you can be hired as an actuary?
- (c) Select “Actuarial Exams” at the top. Name 2 ways employers help their employees with the exams?

4. Go to “How do I get started?” and locate the following information.

- (a) Under “Is This Career for You,” what 3 specialized areas of math are needed for an actuarial career?
- (b) Click “What to Do in High School” and then “Computer Skills.” What two pieces of software are especially important for actuaries to know how to use?

At the top of the page click “College Study” followed by “What to Study.”

- (c) What mathematics courses must be taken in college to become an actuary?
- (d) Name 3 other types of college courses that are necessary for actuaries.

Click “Colleges with Actuarial Programs” at right. Scroll down to the last paragraph and select “University and Colleges with Actuarial Programs.”

- (e) What university in Kansas offers an Actuarial Science degree?

5. Visit “How do I get started?” followed by “Is this career for you?”

- (a) Besides specialized math knowledge, what are the other four skill areas necessary for becoming an actuary?
- (b) Look through the remainder of the website. List two other pieces of information you finding interesting.

6. From the above page click on the Sample Actuarial Problems in the right bar. Find the question that begins with “A blood test ...”. If it is not present, keep refreshing the page until it appears.

- (a) What type of probability is being used to solve the problem?
- (b) Draw the probability tree needed to solve the problem. Use D & H to represent Disease or Healthy and Y and N to represent whether the test result was Yes (positive) or No (negative).