Mathematics Competency Test for Journalists

School of Journalism and Mass Communication
The University of North Carolina at Chapel Hill

Poynter Institute Edition

Please Do Not Write on This Test

Instructions: You have 20 minutes to complete the test. Please feel free to use a calculator and scrap paper, but do not write on the test. If you finish before the end of the 20 minutes, please remain in your seat and check over the answers. Note that in many cases the correct answer is rounded off to the nearest fraction or whole number.

Be very careful about the way in which you mark on the answer sheet:

> Be sure to use a No. 2 pencil.
>
> Mark the appropriate spaces with a single stroke of your pencil.
>
> Mark only in the specified areas.
>
> Erase all errors completely.
>
> Do not make any stray marks.

On the answer sheet, be sure to give the following information:

> Your ID number, written in the grid at the top.
>
> Calculate your ID number as follows:
>
> Your mother's birthday in the format *mmdd* followed by the first
>> letter of her middle name with no intervening space.
>>
>> Example: 0911G for a birthday of Sept. 11, middle name
>> Grace.

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1. Last year, the school spent $8,300 for office equipment. This year, it will spend 5 percent less. How much will it spend this year.

1. $7,885
2. $7,737
3. $6,640
4. $6,690

2. The former assistant manager was demoted to sales clerk. His pay was cut from $8.04 to $4.02. What was the percent decrease?

1. 50 percent
2. 100 percent
3. 200 percent
4. 500 percent

3. A gallon of paint covers a surface area of 400 square feet. How many gallons of paint will be needed to put one coat on one side of a fence that is 7 feet high and 300 feet long?

1. 5.25 gallons
2. 9.33 gallons
3. 52.5 gallons
4. 93.3 gallons

4. Professor Pearbaum asked for volunteers for a psychological experiment. Twelve students stepped forward. The professor chose the third through ninth student. How many volunteers did he choose?

1. 3
2. 6
3. 7
4. 9

5. Bruce Springsteen was born on Sept. 23, 1949. What birthday will he celebrate in the year 2016?

1. His 57th
2. His 67th
3. His 58th
4. His 66th

6. One out of 12 students at Chapel Hill is black. What is the black percent?

1. 6 percent
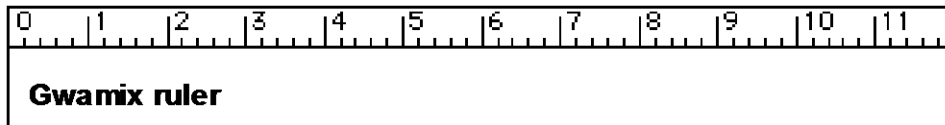2. 8 percent
3. 10 percent
4. 0.1 percent

7. Joe Smith wants builder Seeb Forthgo to build a 2,500-square-foot house for him. Forthgo tells him it will cost $65 a square foot to build. How much will the house cost?

1. $162,500
2. $38,461
3. $16,250
4. $384,610

8. You and your four roommates have ordered a pizza. Because you skipped lunch, it is agreed that you should have a 1/4 share of the total. The roommates divide the remainder equally. How much does each one get?

1. 3/16
2. 4/11
3. 5/8
4. 5/12

9. Below is a Gwamix ruler. (Also known as a Gleeb ruler, since it shows the 12 Gwamixes in a Gleeb.) What does each vertical mark on this ruler represent?

Gwamix ruler

1. one-eighth of a Gwamix.
2. one-10th of a Gwamix.
3. one-fourth of a Gwamix.
4. one-fifth of a Gwamix.

10. The probability that you will be late to work is 50 percent. The probability that your boss will notice your tardiness, if you are tardy, is 50 percent. What is the probability that you will be late <u>and</u> be noticed?

1. 10 percent
2. 25 percent
3. 50 percent
4. 100 percent

11. The spelling and grammar test was taken by 217 students. Thirty-seven failed. What percent passed?

1. 13
2. 17
3. 83
4. 87

12. While in Europe, Joan weighed herself on a scale and discovered that she weighed 43 kilograms. How much did she weigh in pounds? (There are 0.454 kilograms to a pound.)

1. 195 pounds
2. 62.5 pounds
3. 94.7 pounds
4. 105 pounds

13. John Smith is doing a newsletter for Quimby Corp. on a page that is $8\frac{1}{2}$inches wide by 11 inches deep. He must put equal-size pictures of the corporation's president, vice president and secretary treasurer across the top of the page. If he allows for a half-inch margin on each side of the page and for one-quarter of an inch in the space between pictures, how wide will each of the three pictures be?

1. 3 inches.
2. 2.33 inches
3. 4 inches
4. 2.25 inches

14. Joe Smith wants to fence in 6 dog pens on a lot that is 78 feet wide. To make sure that the dogs don't scratch each other through the fence, he plans to leave a 1-foot space between the pens. What will be the exterior width of each dog pen?

1. 12 feet
2. 12 feet 2 inches
3. 12 feet 7 inches
d 14 feet 9 inches.

15. Joanne has been chosen to paint a mural depicting journalism history on a wall in Dean Brown's office. The mural is to be 7 feet tall by 12 feet wide. She wants to sketch out her mural on a piece of paper 18 inches wide. How deep (tall) will the mural be on her paper.

1. 13 inches
2. 10.5 inches
3. 8 inches
4. 2 feet 4 inches

16. The Poynter Institute's budget for computer programs jumped from $5,500 to $7,300. By what percent did it increase?

1. 24.7 percent
2. 32.7 percent
3. 16.4 percent
4. 75.3 percent

17. The walking distance from the Old Well to Carroll Hall is closest to:

1. 500 feet
2. 5,600 feet
3. 15,000 feet
4. 150,000 feet

18. If it is midnight in Los Angeles, what time is it in Tampa?

1. 8 p.m.
2. 4 a.m.
3. 2 a.m.
4. 3 a.m.

19. Reporters at the Goochville Gazette earn the following salaries: $10,000, $12,500, $5,890, $16,453, $14,000. The median reporter salary is:

1. $10,000
2. $12,500
3. $ 5,890
4. none of the above

The next question is about the following table, which shows the distribution of barbecue lovers among North and South Dakotans.

Dakota	North	South
Love Barbecue	37%	49%
Do Not Love It	63	51
Total	100	100

20. Which of the following statements is true?

1. 51 percent of the non-barbecue lovers are in South Dakota.
2. 37 percent of Dakota barbecue lovers are in North Dakota.
3. 37 percent of North Dakotans love barbecue.
4. All of the above.

21. The population of the United States is closest to:

1. 27 million
2. 270 million
3. 2.7 billion
4. 27 billion

22. Minnie Moore owns a house and lot with a taxable valuation of $127,500. Last year, she paid $1,466.25 in property taxes. What was the tax rate, per $100 of valuation?

1. $1.15
2. $11.50
3. 87 cents
4. $8.70

23. If the first year in the Christian calendar is the year 1 and the 100th year is the year 100, on what day will the 21st century begin?

1. Jan. 1, 2000
2. Dec. 31, 1999
3. Jan. 1, 2001
4. Dec. 31, 2000

24. The Wessonville police force has 693 patrol officers. That's 5 percent more than it had in 1982. How many patrol officers did the force have in 1982?

1. 658
2. 555
3. 503
4. 660

25. In 1986, there were three computers in this building. A year later, the number had increased to six. This change in the number of computers from the 1982 level is accurately described as:

1. two times more
2. two times as many
3. a two-hundred percent increase
4. all of the above