

North South Foundation
2026 Regional Contest – *Sample Test Paper*
Math Bee - Level 3

First Name: _____ Last Name: _____

Grade: _____ Badge Number: _____

INSTRUCTIONS

- Section A (Questions 1-20): Multiple Choice. Choose the correct answer (A, B, C, or D) and mark it on the Answer Sheet.
- Section B (Questions 21-30): Free Response. Solve the problem and write the final answer on the Answer Sheet.
- Total Time Limit: 40 Minutes.
- Calculators, books, phones, or aids are not allowed to be used during the contest.
- Scoring: Each correct answer receives one point. No partial credit is given.

SECTION A: MULTIPLE CHOICE (20 Questions)

1) The sum of two numbers is 20, and their product is 96. What is the sum of the reciprocals of the two numbers?

- A) 1/20
- B) 1/96
- C) 5/24
- D) 96/20

2) Event A occurs every 4 days, event B every 6 days, and event C every 8 days. If all three occur on July 1, the next day they will all occur together is:

- A) July 9
- B) July 12
- C) July 16
- D) July 25

3) A number can be written as 2^{10} (2 to the power of 10). How many positive factors does this number have?

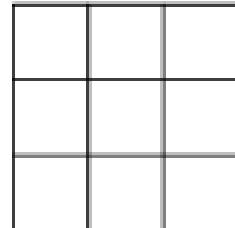
- A) 5
- B) 10
- C) 11
- D) 100

4) If the ratio A:B is 2:3 and the ratio B:C is 4:5, what fraction of the whole (A+B+C) is B?

- A) 4/15
- B) 12/35
- C) 8/35
- D) 15/35

5) This 3 by 3 grid shows nine 1cm \times 1cm squares and uses 24 cm of wire. What length of wire is required for a similar 20 by 20 grid?

- A) 400 cm
- B) 420 cm
- C) 800 cm
- D) 840 cm



6) Which inequality best describes the set of numbers that are 4 units away from -3 on a number line?

- A) $|x - 4| = 3$
- B) $|x + 3| = 4$
- C) $|x - 3| = 4$
- D) $|x + 4| = 3$

7) If one mil is equal to one thousandth of an inch, what is the approximate value of one mil? (note that 1 inch = 2.54 cm)

A) 1/40 mm

B) 1/25 mm

C) 1/4 mm

D) 40 mm

8) Which of the following is NOT a multiple of 5?

A) $2026^2 - 2021^2$

B) $2024^2 \times 10^2$

C) $2020^2 \div 101^2$

D) $2015^2 \div 5^2$

9) The lengths of two sides of a triangle are 7 cm and 12 cm. If a number is chosen randomly from the set {1, 2, 3, ..., 20}, what is the probability that the number chosen could be the length in cm of the third side?

A) 1/2

B) 13/20

C) 7/20

D) 12/19

10) Between 3:00 P.M. and 3:30 P.M., the minute hand of a clock moves 180 degrees. How many degrees does the hour hand move during that same 30-minute period?

A) 5.5 degrees

B) 10 degrees

C) 15 degrees

D) 30 degrees

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SECTION B: FREE RESPONSE (10 Questions)

21) Four numbers are written in a row. The average of the first two is 7. The average of the middle two is 5. The average of the last two is 6. What is the average of the first number and the last number?

22) What is the unit digit of 7 raised to the power of 2025 (7^{2025})?

23) A number leaves a remainder of 4 when divided by 5 and a remainder of 2 when divided by 6. What is the smallest positive number that satisfies these conditions?

24) In a group of 30 students, 15 study Math, 10 study Science, and 6 study both. How many students study neither Math nor Science?

25) A cylindrical tank has a radius of 2 meters and a height of 5 meters. What is the volume of the tank in terms of π cubic meters?

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STUDENT ANSWER SHEET

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Name

Contest

Badge #

1	(A) (B) (C) (D) (E)	21	<input type="text"/>	(C) (X)
2	(A) (B) (C) (D) (E)	22	<input type="text"/>	(C) (X)
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7	(A) (B) (C) (D) (E)	27	<input type="text"/>	(C) (X)
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14	(A) (B) (C) (D) (E)			
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20	(A) (B) (C) (D) (E)			

20MCQ_10FIB_v2 (1807)

OFFICIAL USE ONLY

DO

NOT

USE

ANSWER KEY

Section A

1. C
2. D
3. C
4. B
5. D
6. B
7. A
8. D
9. B
10. C

Section B

21. 8

22. 7

23. 14

24. 11 students

25. 20π cubic meters

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