

# MATHEMATICS 89

**FINAL EXAM**

**Fall 2008 VERSION Lucky**

STUDENT NAME:

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INSTRUCTOR NAME:

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SECTION:

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- This exam has 25 questions. Each question is worth 4 points.
- Show sufficient work to support your answers. If you do not show your work when indicated, you may lose points, **EVEN IF YOU HAVE THE CORRECT FINAL ANSWER.**
- This is a closed book exam. No notes, no books allowed.
- No calculators allowed.
- Write your name at the top of each page.
- Show your work in the space indicated. If you do not have enough room to work on a particular problem, you can use the back of the previous page or an extra sheet of paper. Make sure that the graders can find any work that you want graded. Write your name and student number on any extra paper.

Question	1	2	3	4	5	6	7	8	9	10	11	12	13
Score													

Question	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL
Score													

NAME: \_\_\_\_\_

1. Circle the true statements below.

$$7 \neq 7$$

$$2 \geq -5$$

$$-3 \leq -3$$

$$2 < 2$$

$$-3 < -7$$

2. Rewrite  $3 \cdot 3 \cdot 3 \cdot 3 \cdot 7 \cdot 7 \cdot 7$  using exponents.

Answer: \_\_\_\_\_

3. Find  $|-2.439|$ .

Answer: \_\_\_\_\_

4. Reduce  $\frac{21}{35}$  to lowest terms.

Answer: \_\_\_\_\_

5. Find the LCM of 26 and 39.

Answer: \_\_\_\_\_

6. Find  $\frac{36}{35} \div \frac{6}{5}$ . Write your answer in lowest terms.

Answer: \_\_\_\_\_

NAME: \_\_\_\_\_

7. Find  $\frac{4}{15} - \frac{1}{10}$ . Write your answer in lowest terms.

Answer : \_\_\_\_\_

8. Find  $-389 - (-215)$ .

Answer : \_\_\_\_\_

9. Find  $(29 - 5) \div 2^2 + 3 \cdot 5$ .

Answer : \_\_\_\_\_

10. Find  $45 \div [(2 \cdot 3) - (5 \cdot 2) + 1]$ .

Answer : \_\_\_\_\_

11. Simplify  $2(5y + 6) - 10$ .

Answer : \_\_\_\_\_

NAME: \_\_\_\_\_

12. What are the coefficients in the expression  $6x^2 - x - 5y + 2$ ?

Answer: \_\_\_\_\_

13. Evaluate  $8m + 2k - 8k^2$  when  $m = 6$  and  $k = -2$ .

Answer: \_\_\_\_\_

14. Solve  $x + 14 = 37$  for  $x$ .

Answer: \_\_\_\_\_

15. Solve  $4(w + 2) - 2w = w + 15$  for  $w$ .

Answer: \_\_\_\_\_

16. The score on a certain college entrance exam can be written as  $S = 200 + 20R - 5W$ , where  $S$  is the score,  $R$  is the number of correct answers, and  $W$  is the number of incorrect answers. Solve the equation  $S = 200 + 20R - 5W$  for  $W$ .

Answer: \_\_\_\_\_

NAME: \_\_\_\_\_

17. The sum of four consecutive integers is 54. What is the LARGEST of these integers?

Answer : \_\_\_\_\_

18. Duhwa is 4 years more than 22 times as old as Norayr. If the sum of their ages is 96, how old is Duhwa?

Answer : \_\_\_\_\_

19. When the unequal side of an isosceles triangle is increased by 3 inches, the triangle becomes an equilateral triangle. If the perimeter of the isosceles triangle was initially 21 inches, how long was each side of the original triangle?

Answer : \_\_\_\_\_

NAME: \_\_\_\_\_

20. Solve  $x + 7 \leq 21$ .

Answer : \_\_\_\_\_

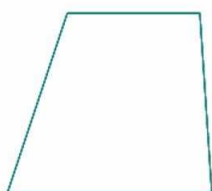
21. Solve  $-21 \leq 6 - 3y < 18$ .

Answer : \_\_\_\_\_

22. Below, draw a number line, and graph the inequality  $4 < x \leq 9$ .

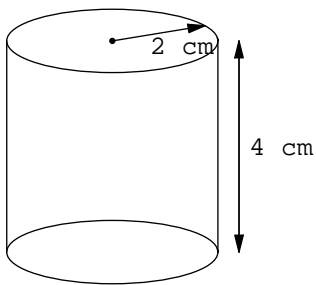
23. The polygon below has four sides, two of which are parallel. What is the name of this shape? Be as specific as possible.

Answer : \_\_\_\_\_

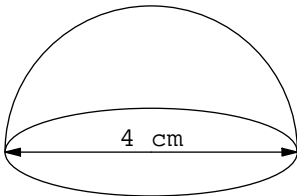


24. What is the total surface area of the cylinder below? In answering this question, do not approximate  $\pi$ —instead, leave  $\pi$  in your answers.

Answer : \_\_\_\_\_



25. What is the volume of the hemisphere below? In answering this question, do not approximate  $\pi$ —instead, leave  $\pi$  in your answers.



Answer : \_\_\_\_\_