

Midterm I

MATH 050

Saturday, January 73, 2039

9:60 – 10:90 PM Founders Auditorium

Instructions: Show all work. Failure to show work may result in loss of credit. Write your solutions in the space provided on the *answer sheets*. Do not hand in scratch paper. There are fifteen questions. You may use your scientific calculators (*not* those that are programmable!). Please remember to *simplify* your answers. Decimal point number notation is allowed only in Questions 14 and 15. Some partial credit *may* be given. **Good Luck!**

- 1) Write each number as a product of primes. (a) 551 ; (b) 874 .
- 2) Perform the indicated operations. Write your answer in lowest terms. $\frac{13}{114} + \frac{6}{114}$.
- 3) Perform the indicated operations. Write your answer in lowest terms. $\frac{7}{5} - \frac{5}{8} + \frac{9}{20}$.
- 4) Perform the indicated operations. Write your answers in lowest terms.
(a) $\frac{20}{51} \div \frac{5}{34}$; (b) $\frac{13}{56} \cdot \frac{35}{91}$.
- 5) Simplify. $-3(4 + 2(-5 + 12))$; 6) Simplify. $\frac{3^2 + |5 - 8| - 1}{15 - 4}$.
- 7) If $x = -3$ and $y = 2$, evaluate the following expression. $\frac{3x + 4y}{3 - y}$.
- 8) Simplify. $-2(3y - 5) + 3(-y + 2)$.
- 9) (a) Subtract $8z - 3$ from $z + 11$ and simplify.
(b) Add $-7x + 5$ to $2x + 5$ and simplify.
- 10) Write the following phrase as an algebraic expression and simplify: The difference of a number and 16 , added to seven.
- 11) Solve $S = 3ab + bc$ for c . 12) Solve $\frac{x}{13} + 5 = \frac{2x}{25} - 5$.
- 13) Solve $4(6 - x) = x - (5x + 12)$.
- 14) Twice the sum of a number and ten equals five times the number. Find the number.
- 15) A carpet cleaning service charges \$28 plus \$24.99 per hour to come to your home. If your total bill from this company is \$352.87 before taxes, how many hours were you charged?

Points: 4+4, 6, 6; 5+5, 6, 6, 6; 6, 5+5, 6, 6; 6, 6, 6, 6.

You are welcome to keep this *Questions Sheet* for your files.