

After Exam 1

Instructions:

- 1) Show all work downward on a separate sheet of paper.
- 2) Use equal signs only with equations
- 3) All answers are circled and on a separate line below the problem
- 4) Skip two lines between problems
- 5) No decimals except for problems 15 and 16.
- 6) Positive exponents only.

Solve the compound inequality. Express the solution set on a graph, Interval, and set notation.
(Answers are expressed three ways).

1) $2x > 5x - 15$ and $7x > 2x + 10$

2) $3x + 2 \leq 5$ or $5x - 7 \geq 8$

Solve the inequality. Express the solution set on a graph, and interval notation.

3) $2 | 2x - 3 | + 10 > 12$

Factor completely

4) $12x^3 + 36x^2y + 27xy^2$

5) $24x^3 - 3$

6) $32y^2 + 4y - 6$

7) $12x^4 - 8x^2$

Simplify Completely,

8) $\left(\frac{10x^3y^5}{5x^6y^{-2}}\right)^2$

9) $\frac{-24a^3c^{-5}e^5}{-3a^{-6}c^{-4}e^{-7}}$

Find the solution. Express the answer in roster form.

10) $\{1,2,3,4\} \cup \{2,4,5\}$

Explain the meaning of the follow symbols as related to sets in a complete English sentence, then give an example.

11) \cup

12) \cap

Explain the meaning of the follow words as related to sets in a complete English sentence, then give an example.

13) and

14) or

Perform the indicated operation. Write the answer in scientific notation

15) $\frac{(0.00072)(0.0003)}{0.00024}$

16) $(4.6 \times 10^4)(8.2 \times 10^{-7})$