

Name _____

Date _____

Instructor _____

CRN _____

Be sure to write answers on the answer line for each problem

1. Compute, if possible. Otherwise, write “undefined”: $-10 \div 0$

Ans _____

2. Compute, if possible. Otherwise, write “undefined”: $-8(-2) - 8$

Ans _____

3. Evaluate: $\frac{2}{3} + \left(-\frac{3}{7}\right)$

Ans _____

4. Compute: $\frac{9}{7} \times \frac{4}{3}$

Ans _____

5. Compute, if possible. Otherwise, write “undefined”: $-\frac{4}{\frac{11}{10}}$

Ans _____

6. Evaluate, if possible. Otherwise, write “undefined”: $0.13 \div 10 =$

Ans _____

7. Compute, if possible. Otherwise, write “undefined”: $-0.2 \times (-0.3) \times (-0.4)$

Ans _____

8. Evaluate, if possible. Otherwise, write “undefined”: $-\left(\frac{-2}{3}\right)^3$

Ans _____

9. Evaluate, if possible. Otherwise, write “undefined”: $-2 \times \frac{1}{2} - 2^2 =$

Ans _____

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10. Determine whether the following examples represent an equation or an algebraic expression. Circle ALL algebraic expressions.

a) $3x - 7y = 5$

b) $x = 0$

c) $9x - 7y + 3c + 8$

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11. Solve the following inequality: $8 + 6x \geq -3$

Ans _____

-
12. Graph the following number set on a number line. Assume that the distance between all marks is the same.

$$x \leq -1$$



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13. Name three numbers that satisfy the condition: $x > \frac{1}{2}$

Ans _____

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14. Rewrite the expression $-A$ replacing the variable with its value and then evaluate if $A = -2$.

Ans _____

15. Simplify, using one of the exponential laws, if possible, If it is not possible to simplify, just rewrite the expression: $x^7 x^{15}$

Ans _____

16. If possible, collect like terms. If not possible, just rewrite the expression $-m^3 + m^3$

Ans _____

17. Factor m from the expression: $5mn + 3m$

Ans _____

18. Simplify if possible. If no numerical operation can be performed, write “not possible”: $\frac{0.4y}{-0.02}$

Ans _____

19. Simplify: $2(x^2)^3 x$

Ans _____

20. Use the Distributive Law to eliminate parentheses in the following expression. Simplify, if possible. $x(2 - x^2)$

Ans _____

21. Eliminate parentheses in the following expression. Simplify $(b^4 + c)(c + cb^5)$

Ans _____

22. Factor $3z^2y^3$ from the following expression: $3z^4y^6 - 9y^4z^2$

Ans _____

23. Simplify, if possible. If not possible, write "not possible": $\frac{xy - xy^2}{3yx}$

Ans _____

24. Is $x = -1, y = 0$ a solution of $\frac{y}{x} = 4$? Show your work.

Ans _____

25. Rewrite the following expression in its equivalent form as a single fraction: $\frac{a}{x-2} + \frac{2b}{x-2}$

Ans _____

26. Rewrite using exponential notation whenever it is possible: $-aaaa-aa$

Ans _____

27. Simplify, if possible. If not possible, write "not possible": $\frac{ab-c}{ab}$

Ans _____

28. Simplify by collecting like terms: $2+a-2a-2.3$

Ans _____

29. Solve the following equation: $6x = 15x$

Ans _____

30. Solve the following inequality: $x < x$

Ans _____

31. Factor the following expression: $m^2 - 81n^2$

Ans _____

32. Express $\frac{x^2y}{4}$ in terms of s , if $x = s^3$, $y = 2s$. i.e. substitute s^3 for x and $2s$ for y . Simplify, if possible.

Ans _____

33. Eliminate parentheses and simplify by collecting like terms: $-(2q + 6) - 2q - 5q$

Ans _____

34. If possible, collect like terms. If not possible, write "not possible": $0.24xy - 0.17x$

Ans _____

35. Solve the following equation: $0.2(x + 3) = 0.2x + 3(0.1 - x)$

Ans _____

36. Solve for x : $-x = a$

Ans _____

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37. Use the letter m to represent a number and write the following as an algebraic expression:
The difference between a number and 4, then multiplied by y .

Ans _____

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38. Write the expression x^{24} in the form a^6 . Identify a in your representation.

Ans _____

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39. Factor -1 from the following expression: $\frac{2}{3}x^2y - \frac{4}{3}z$

Ans _____

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40. Evaluate the expression $-\frac{xy}{z}$, if $\frac{xy}{z} = -\frac{1}{3}$

Ans _____

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41. Circle all of the following expressions that are equivalent to $\frac{-b+da}{6}$

$$-\frac{ad}{6} - \frac{b}{6}, \quad \frac{b+da}{-6}, \quad (ad-b) \div 6$$

42. Perform the indicated operations and simplify: $-\frac{a^4}{a^4} \cdot a^2$

Ans _____

43. Eliminate parentheses and simplify: $(x^3 + 2x^2 - 2x)(x^2 - x^3)$

Ans _____

44. Write the expression $(6^a)^b$ in terms of m , if $ab = m$

Ans _____

45. Express $(m+n)(m^2 - mn + n^2)$ in terms of x , if $m = 2$, and $n = 3x$. Simplify.

Ans _____
