MAT 0024  
Test 1 Review Homework

1. Which of the following statements is not true:
   a. \( 5t + y = y + 5t \)
   b. \( (8x - y) - m = 8x - (y - m) \)
   c. \( (6m + 4) + t = 6m + (4 + t) \)
   d. \( \frac{1}{2}(m*8) = (\frac{1}{2}m) * 8 \)

2. Which statement is equivalent to: \( 6m + (x + y) \)
   a. \( 6m + xy \)
   b. \( (x + y) + 6m \)
   c. \( 6mx + 6my \)
   d. \( 6x + (m + y) \)

3. The formula for area \( (A) \) of a rectangle is \( A = lw \). Find the area of a projection screen whose length \( (l) \) is 7 feet and whose width \( (w) \) is 18 feet.

Simplify:

4. \( 6x - 3a + x - 4a \)
5. \( 8x - 4 - (6 - 3x) \)
6. \( 6x^2 + x - 2(x^2 + 3x) \)

Evaluate for given values of the variables:

7. \( \frac{x + y}{4} \), for \( x = -16 \), \( y = -4 \)
8. \( 4x^2 - x \), for \( x = -3 \)

Simplify.

9. \(-10 + 4\)
10. \(-7 - 10\)
11. \((-6)(2)\)
12. \(5 + (-2) - 6 - (-8)\)
13. \(-\frac{24}{8}\)
14. \(-5(2)(-1)(-7)\)
15. \(1 - 12 - 3 + 5\)
16. \(\frac{10}{0}\)
17. Write \(-8(-8)(-8)\) in exponent notation.
18. Factor the following expression. \(12x + 18\)

19. Multiply using the distributive law. \(4(2x - 3y - 1)\)

20. Evaluate. \(-3^2\)

Simplify using order of operations.

21. \(|-6 + 2|\)

22. \(3 \cdot 2^2\)

23. \(18 - (2 - 5)\)

24. \(6(2) + 3(-4)\)

25. \(-32 \div 4(2)\)

26. \(-2(6) \div 3(2)\)

27. \(12 \div 4 - 2 \cdot 5\)

28. \(30 - 12 \div 12 - 6\)

29. \(25 - 2(3 - 4)\)

30. \(|2 - 7| + 3(-4)\)

31. \(\frac{4 - 4(2)}{3(2) - 8}\)

32. \(-8 - 3[5 - 2(4 - 1)]\)

33. \((3 - 5)^2 - 6 + 1\)

Answers: 1) b  2) b  3) 126 sq feet  4) 7x - 7a  5) 11x - 10  6) \(4x^2 - 5x\)  7) -5  8) 39  9) -6  10) -17  11) -12  12) 5  13) -3  14) -70  15) -9  16) undefined  17) \((-8)^3\)  18) 6(2x + 3)  19) 8x - 12y - 4  20) -9  21) 4  22) 12  23) 21  24) 0  25) -16  26) -8  27) -7  28) 23  29) 27  30) -7  31) 2  32) -5  33) -1