

MES44QT Exam 2 Review Sheet

Topics:

- Multiplying and Dividing Monomials
- Negative Exponents and Zero Exponents
- Scientific Notation
- Multiplying and Dividing Polynomials by Monomials
- Multiplying Polynomials
- Factoring out the Greatest Common Factor (GCF)
- Factoring Quadratic Trinomials
- Factoring the Difference of Two Perfect Squares
- Factoring Completely

In 1 – 10, perform the indicated operation and simplify the result.

1. $(-2x^3y^5)(3ax^2)$

6. $(x-10)^2$

2. $\frac{-40x^3mg^2}{10xmg^4}$

7. $\frac{6w^3+8w^2-2w}{2w}$

3. $2x(x^3-5x^2+1)$

8. $\frac{(2x^4)(8x^7)}{2x^5}$

4. $-3a^2b(5a^5b^2-ab+10b)$

9. $\frac{6w^3+8w^2-2w}{2w}$

5. $(x-4)(x+8)$

10. $(-4a^3b)^2$

11. Express $9^3 \cdot 9^8 \cdot 9$ as a power of 9.

12. Express the product of 7×10^5 and 2×10^4 in scientific notation.

13. Express the quotient 16×10^{-6} and 2×10^{-11} in scientific notation.

14. Evaluate $5x^0 - (2x)^0$.

In 10 – 26, factor completely.

15. $b^2 - 25$

21. $y^2 + 11y + 18$

16. $4x^2 - 81$

22. $x^2 - 7x + 10$

17. $60x^3y^2 - 18x^2y$

23. $5a^2b - 15ab^2 + 5ab$

18. $4a^3b^2c^4 - 2a^2bc^2$

24. $3x^4 + 15x^3 - 42x^2$

19. $a^2 - a - 2$

25. $d^4 - 16d^2$

20. $x^2 - 6x + 9$

26. $2x^2 + 10x - 12$