Student Name:

(2 points per question; 1 = showing work; 1 = correct answer)

Correct each of the following errors by circling the error, describing what is wrong, entering what should be there instead, and entering the correct answer.

1. $(3x^2)(-2x^4) = 3(-2)x^{2\cdot4} = 6x^8$

2. $4a^2 \cdot 3a^5 = (4 + 3)a^{2+5} = 7a^7$

3. $x^6 \cdot x \cdot x^3 = x^{6+3} = x^9$

4. $3^4 \cdot 2^3 = 6^{4+3}$

Exponent Properties Assignment

Using the properties you've learned, complete each equation and solve for the variable.

5. $8^2 \cdot 8^x = 8^{11}$	6. $5^7 \cdot 5^b = 5^3$	7. $x^{12} \cdot x^n = x^{12}$

Simplify.

8. $(2x^2y^3)(4xy^{-2})$	9. $-4x^3(2x^2 - 9x)$	10. $4^{y+1} \cdot 4^{1-x}$
11. $5t^{-2} \cdot 2t^{-5}$	12. $(3x)^4$	13. $(6m^4)^2$
14. $(x^2)^5(x^3)^2$	15. $(3b^{-2})^2(a^2b^4)^3$	16. $(2a^2b^5)^{-4}(b^{-1}a^8)^6$

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Simplify.

17. $\dfrac{10^9}{10^3}$	18. $\dfrac{4m^{10}}{2m^8}$	19. $\dfrac{y^3 z^{10}}{y^5 z^8}$
20. $\dfrac{a^8 b^6 c^7}{a^4 b^{10} c^3}$	21. $\dfrac{d^2 e^3 f^5}{e^6 f^7 g^8}$	22. $\dfrac{m^{-3}}{3m^6}$