

Algebra I
10.1 Warm-Up #1
Product of Powers Property

NAME: _____
DATE: _____ HOUR: _____

$$b^m \cdot b^n = \underline{\hspace{2cm}}$$

(when the bases are the same, ADD the exponents to multiply)

A variable without an exponent has the understood exponent of .

Simplify if possible.

1. $m^4 \cdot m^6$

2. $b^7 \cdot b^2$

3. $x^4 \cdot y^2$

4. $p \cdot p^2$

5. $(5a^3)(6a^7)$

6. $(6n^4)(3n^3)$

7. $(5m^4)(4m^5)$

8. $(3b^2)(4b^3)$

9. $(a^3)(6a^4)$

10. $(5b^4)(b^2)$

11. $(8a^7)(a^5)$

12. $(m^6)(3m^4)$

over

13. $(-3a^4)(5a)$

14. $(4b^2)(-5b)$

15. $(-5b^7)(3b)$

16. $(-3b^4)(4b)$

17. $(4a^2b^4)(3a^3b^2)$

18. $(5x^3y^4)(2x^4y^3)$

19. $(7m^3n^2)(-5m^3n^6)$

20. $(-3ab^3)(7a^2b^5)$

21. $(-3a^4b)(-5ab^2)$

22. $(xy)(xy)$

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

24. $(-b^3m^5)(-2bm)$

25. $(-4x^5y^6)(-2xy)$

26. $(-p^2)(4p)(-2p^5)$

27. $(-5r^2)(-2r)(4r)$

28. $(6a^3)(-2a)(5a)$

29. $(u^2vw^3)(u^3v^2w^4)$

30. $(-2abc)(4a^2bc^4)$

31. $(-2x^2yz)(xy^3z)$

In 1-4, evaluate.

1. 2^3 _____ 2. 3^2 _____ 3. $(-2)^4$ _____ 4. $-(2^4)$ _____

13. $(-3a^4)(5a)$

14. $(4b^2)(-5b)$

15. $(-5b^7)(3b)$

16. $(-3b^4)(4b)$

17. $(4a^2b^4)(3a^3b^2)$

18. $(5x^3y^4)(2x^4y^3)$

19. $(7m^3n^2)(-5m^3n^6)$

20. $(-3ab^3)(7a^2b^5)$

21. $(-3a^4b)(-5ab^2)$

22. $(xy)(xy)$

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

24. $(-b^3m^5)(-2bm)$

25. $(-4x^5y^6)(-2xy)$

26. $(-p^2)(4p)(-2p^5)$

27. $(-5r^2)(-2r)(4r)$

28. $(6a^3)(-2a)(5a)$

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over