

NAME _____ DATE _____ SCORE _____

Multiplying Monomials; Powers of Monomials

Simplify.

- | | |
|--|---|
| <p>1. $a^2 \cdot a^4 \cdot a^3$ _____</p> <p>3. $(3x^2)(2x^4)(5x)$ _____</p> <p>5. $(x^2y)(x^4y^2)$ _____</p> <p>7. $(-ac)(-bc)(-ab)$ _____</p> <p>9. $\left(\frac{1}{3}mp^2\right)(3m^2p)(mp)$ _____</p> <p>11. $a^m \cdot a^2$ _____</p> <p>13. $4^2 \cdot 4^{k+2} \cdot 4^k$ _____</p> <p>15. $(a)(2a^2) + (3a^2)(4a)$ _____</p> <p>17. $(2x^6)(4x^2) + (3x^5)(2x^3)$ _____</p> <p>19. $(x^3)^2$ _____</p> <p>22. $(4mn)^2$ _____</p> <p>25. $(-3xy^2)^3$ _____</p> <p>28. $(2a)^2(3a)$ _____</p> <p>31. $(-2x^4)^2$ _____</p> <p>34. $-(3x)^3$ _____</p> <p>37. $(3a)(3a)^3$ _____</p> <p>40. $(2xy^2)^3 \cdot 4xy$ _____</p> <p>42. $(3x^2y^2)^2(xy)^3$ _____</p> | <p>2. $(2c^3)(4c^2)$ _____</p> <p>4. $(-5a^2)(-7a)$ _____</p> <p>6. $(-x^3y^4)(-2x^2y^5)$ _____</p> <p>8. $(3bc^2d^3)(4b^2c^2)(-5d^4)$ _____</p> <p>10. $\left(-\frac{3}{8}mn^2\right)(4m^2n)(m^2n^2)$ _____</p> <p>12. $y^a \cdot y^{a+2}$ _____</p> <p>14. $(-x)^3(-x)^4(-x)^5$ _____</p> <p>16. $(3b^3)\left(\frac{4}{9}b\right) + \left(\frac{2}{3}b^2\right)(b^2)$ _____</p> <p>18. $(7y^4)(2y^2) - (2y^3)(7y^3)$ _____</p> <p>20. $(a^6)^3$ _____</p> <p>23. $(2a^2)^4$ _____</p> <p>26. $(-5m^2n^3)^3$ _____</p> <p>29. $(2a^2)(3a)^2$ _____</p> <p>32. $-(2x^4)^2$ _____</p> <p>35. $(-3x^2)^5$ _____</p> <p>38. $(4x)^2(4x)$ _____</p> <p>41. $(-3c^2d)^4\left(\frac{1}{9}d\right)^3$ _____</p> <p>21. $(3x)^2$ _____</p> <p>24. $\left(\frac{1}{2}m^3\right)^2$ _____</p> <p>27. $(-2s^3t^2)^4$ _____</p> <p>30. $(xy^2)^3(2x^2y)$ _____</p> <p>33. $(-3x)^3$ _____</p> <p>36. $-(3x^2)^5$ _____</p> <p>39. $(2n)^3\left(\frac{3}{2}n\right)^3$ _____</p> |
|--|---|

Evaluate if $a = -1$ and $b = 2$.

- | | | |
|---------------------|------------------------------|--------------------|
| 43. $3a^2$ _____ | 44. $(3a)^2$ _____ | 45. $-5b^2$ _____ |
| 46. $(-5b)^2$ _____ | 47. $(-5)^2 \cdot b^2$ _____ | 48. a^2b^2 _____ |