Multiplying Monomials and Powers of Monomials  
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Simplify.

1. \((x)(3x)\)  
   \[3x^2\]

2. \((-2ab)(-2a^2)\)  
   \[4a^3b\]

3. \((2xyz)(3y^2)\)  
   \[6y^3z\]

4. \(x^2(3y^2)(4xy)\)  
   \[12x^3y^3\]

5. \(4x^5(-x^3y^2z)(-y^2z)\)  
   \[4x^8y^4z^2\]

6. \((x^4)^2\)  
   \[x^8\]

7. \((-3m^2)^3\)  
   \[-27m^6\]

8. \((2c^4a^3)^4\)  
   \[16c^{16}a^{12}\]

9. \((-p^5q^2)^2\)  
   \[p^{10}q^4\]

10. \(-p^5q^2)^2\)  
    \[-p^{10}q^4\]

11. \((3u)(uv^4)^2\)  
    \[3u^3v^8\]

12. \(-2s(st)^4\)  
    \[-2s^5t^4\]

13. \(3m^2n^3(m^2n)^3\)  
    \[3m^8n^6\]

14. \((yz^2)^2(-4y^2z^2)(2z^2)\)  
    \[32y^6z^6\]

15. \((-pq^2)^2(2pq)^3(5p^2q)\)  
    \[40p^7q^8\]

Please visit the Learning Lab for further assistance.