

Multiplying Monomials

~~$$3a^3 \cdot 5a^5 = 15a^{15}$$~~



$$3a^3 \cdot 5a^5 = 15a^8$$

Tip

When multiplying monomials, multiply coefficients but add exponents on variables.

Multiply the following monomials. Use the code to discover the location of the largest library in the United States, excluding the Library of Congress.

1. $x^3 \cdot x^5 \cdot x =$
2. $3x^4 \cdot 5x^2 =$
3. $2x^5 \cdot 3x^4 \cdot 5x =$
4. $xy^2 \cdot x^3y =$
5. $5x^2y \cdot 6xy^2 =$
6. $(-x^2y^5)(-3x^4y^7) =$
7. $\frac{1}{2}x^2y \cdot 2xy^3 =$
8. $(-3x^2y)(2x^2y^3) =$
9. $x^{3a} \cdot x^a \cdot x^{2a} =$
10. $x^{a+5} \cdot x^{a+2} \cdot x^{3a} =$
11. $2x^a \cdot 5x^{2a} \cdot 3x^3 =$
12. $-2x^3 \cdot 4x^2 \cdot 5y =$
13. $-3x^2 \cdot -y^2 \cdot -2xy =$
14. $3x^2y^3z \cdot 1.5xy^2 \cdot 2xyz^2 =$
15. $\frac{3}{4}x^2 \cdot 2x^2y \cdot \frac{2}{3}xy^3 =$
16. $-6x^2y^3z^2 \cdot -2xyz \cdot 4 =$
17. $x^2y^3 \cdot xy \cdot x^ay^a \cdot xy^2 =$

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|---|------------------|
| S | $30x^{10}$ |
| R | x^4y^3 |
| R | $30x^3y^3$ |
| V | x^3y^4 |
| U | x^5y^4 |
| H | $48x^3y^4z^3$ |
| I | x^9 |
| A | $-40x^5y$ |
| D | $x^{a+4}y^{a+6}$ |
| I | $9x^4y^6z^3$ |
| R | $15x^6$ |
| A | x^{5a+7} |
| N | $3x^6y^{12}$ |
| E | $-6x^3y^3$ |
| V | x^{6a} |
| Y | $30x^{3a+3}$ |
| T | $-6x^4y^4$ |



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|-----------|-----------|-----------|----------|-----------|----------|-----------|----------|----------|-----------|
| <u>16</u> | <u>10</u> | <u>5</u> | <u>7</u> | <u>12</u> | <u>4</u> | <u>17</u> | | | |
| <u>15</u> | <u>6</u> | <u>14</u> | <u>9</u> | <u>13</u> | <u>2</u> | <u>3</u> | <u>1</u> | <u>8</u> | <u>11</u> |

