

Multiplication and Division Properties of Exponents

**Simplify the following:**

1.  $3^4 \cdot 3^2$

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2.  $2^5 \cdot 2^4$

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3.  $2^3 \cdot 2^5 \cdot 2^1$

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4.  $q^{-6} \cdot q^{-1}$

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5.  $r^{-3} \cdot r^4 \cdot s^{-4}$

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6.  $j^{-2} \cdot j^{-4} \cdot j^2$

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7.  $c^5 \cdot b^{-2} \cdot c^3$

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8.  $(h^2)^5$

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9.  $(g^4)^{-2}$

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10.  $(w^6)^0$

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11.  $(v^2)^5 \cdot v^4$

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12.  $(w^5)^{-2} \cdot w^{-3}$

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13.  $(f^6)^{-4} \cdot f^{-3}$

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14.  $(a^{-2})^{-3} \cdot (a^5)^2$

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15.  $(3b)^4$

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16.  $\frac{14a^{-4}}{20bc^{-1}}$

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17.  $\frac{a^4c^2e^0}{b^{-1}d^{-3}}$

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18.  $\frac{-3g^{-2}hk^{-2}}{-6h^0}$

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19.  $(s^4t)^3 \cdot (s^4t^3)^2$

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20.  $(a^2b^4)^2 \cdot (a^{-2}b^3)^{-1} \cdot a^4$

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21.  $(x^3y^2)^{-4} \cdot (x^2y^{-3})^{-2}$

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22.  $\frac{c^3d^2}{c^2d^5}$

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23.  $\frac{(x^4)^2}{(x^3)^5}$

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24.  $\left(\frac{s^3t}{st^4}\right)^2$

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