

Chapter 5: Operations with Algebraic Expressions

When $-9x^5$ is divided by $-3x^3$, $x \neq 0$, the quotient is

1. $-3x^2$
2. $3x^2$
3. $-27x^{15}$
4. $27x^8$

Expressed in simplest form, $(3x^3)(2y)^2(4x^4)$ is equivalent to

1. $24x^{12}y^2$
2. $24x^7y^2$
3. $48x^{12}y^2$
4. $48x^7y^2$

What is the product of $\frac{1}{3}x^2y$ and $\frac{1}{6}xy^3$?

1. $\frac{1}{2}x^2y^3$
2. $\frac{1}{9}x^3y^4$
3. $\frac{1}{18}x^2y^3$
4. $\frac{1}{18}x^3y^4$

What is the product of $10x^4y^2$ and $3xy^3$?

1. $30x^4y^5$
2. $30x^4y^6$
3. $30x^5y^5$
4. $30x^5y^6$

Simplify the following expression: $3x^2yw \cdot 12xy^4z$

1. $36x^3y^5wz$
2. $36x^2y^4wz$
3. $15x^3y^5wz$
4. $36x^3y^5w^2z$

Simplify the following expression: $(7abc^2) \cdot (-3a^2b^3c)$