

Algebraic Expressions and Identities Ex 6.3 Q9 Answer:

Answer:

To multiply algebraic expressions, we use commutative and associative laws along with the law of indices, i.e., $a^m \times a^n = a^{m+n}$.

We have

$$(7ab) \times (-5ab^{2}c) \times (6abc^{2})$$

$$= \{7 \times (-5) \times 6\} \times (a \times a \times a) \times (b \times b^{2} \times b) \times (c \times c^{2})$$

$$= \{7 \times (-5) \times 6\} \times (a^{1+1+1}) \times (b^{1+2+1}) \times (c^{1+2})$$

$$= -210a^{3}b^{4}c^{3}$$

Thus, the answer is $-210a^3b^4c^3$

Algebraic Expressions and Identities Ex 6.3 Q10

Answer

To multiply algebraic expressions, we use commutative and associative laws along with the law of indices, i.e., $a^m \times a^n = a^{m+n}$.

We have:

$$(-5a) \times (-10a^{2}) \times (-2a^{3})$$

$$= \{(-5) \times (-10) \times (-2)\} \times (a \times a^{2} \times a^{3})$$

$$= \{(-5) \times (-10) \times (-2)\} \times (a^{1+2+3})$$

$$= -100a^{6}$$

Thus, the answer is $-100a^6$

Algebraic Expressions and Identities Ex 6.3 Q11

Answer

To multiply algebraic expressions, we use commutative and associative laws along with the law of indices, i.e., $a^m \times a^n = a^{m+n}$.

We have:

$$\begin{aligned} & \left(-4x^2 \right) \times \left(-6xy^2 \right) \times \left(-3yz^2 \right) \\ & = \left\{ \left(-4 \right) \times \left(-6 \right) \times \left(-3 \right) \right\} \times \left(x^2 \times x \right) \times \left(y^2 \times y \right) \times z^2 \\ & = \left\{ \left(-4 \right) \times \left(-6 \right) \times \left(-3 \right) \right\} \times \left(x^{2+1} \right) \times \left(y^{2+1} \right) \times z^2 \\ & = -72x^3y^3z^2 \end{aligned}$$

Thus, the answer is $-72x^3y^3z^2$.

Algebraic Expressions and Identities Ex 6.3 Q12

Answer

To multiply algebraic expressions, we use commutative and associative laws along with the law of indices, i.e., $a^m \times a^n = a^{m+n}$.

We have:

$$\begin{split} &\left(-\frac{2}{7}a^4\right)\times\left(-\frac{3}{4}a^2b\right)\times\left(-\frac{14}{5}b^2\right) \\ &=\left\{\left(-\frac{2}{7}\right)\times\left(-\frac{3}{4}\right)\times\left(-\frac{14}{5}\right)\right\}\times\left(a^4\times a^2\right)\times\left(b\times b^2\right) \\ &=\left\{-\left(\frac{2}{7}\times\frac{3}{4}\times\frac{14}{5}\right)\right\}\times a^{4+2}\times b^{1+2} \\ &=\left\{-\left(\frac{\mathcal{Z}}{\mathcal{Z}}\times\frac{3}{\mathcal{X}_{\mathcal{X}}}\times\frac{\mathcal{M}^{\mathcal{Z}^1}}{5}\right)\right\}\times a^6\times b^3 \\ &=-\frac{3}{7}a^6b^3 \end{split}$$

Thus, the answer is $-\frac{3}{5}a^6b^3$.

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