



Algebraic Expressions and Identities Ex 6.5 Q11

**Answer :**

To multiply, we will use distributive law as follows:

$$\begin{aligned}(2x^2y^2 - 5xy^2)(x^2 - y^2) \\= 2x^2y^2(x^2 - y^2) - 5xy^2(x^2 - y^2) \\= 2x^4y^2 - 2x^2y^4 - 5x^3y^2 + 5xy^4\end{aligned}$$

Thus, the answer is  $2x^4y^2 - 2x^2y^4 - 5x^3y^2 + 5xy^4$ .

Algebraic Expressions and Identities Ex 6.5 Q12

**Answer :**

To multiply the expressions, we will use the distributive law in the following way:

$$\begin{aligned}\left(\frac{x}{7} + \frac{x^2}{2}\right)\left(\frac{2}{5} + \frac{9x}{4}\right) \\= \frac{x}{7}\left(\frac{2}{5} + \frac{9x}{4}\right) + \frac{x^2}{2}\left(\frac{2}{5} + \frac{9x}{4}\right) \\= \frac{2x}{35} + \frac{9x^2}{28} + \frac{x^2}{5} + \frac{9x^3}{8} \\= \frac{2x}{35} + \left(\frac{45+28}{140}\right)x^2 + \frac{9x^3}{8} \\= \frac{2x}{35} + \frac{73x^2}{140} + \frac{9x^3}{8}\end{aligned}$$

Thus, the answer is  $\frac{2x}{35} + \frac{73x^2}{140} + \frac{9x^3}{8}$

Algebraic Expressions and Identities Ex 6.5 Q13

**Answer :**

To multiply, we will use distributive law as follows:

$$\begin{aligned}& \left(-\frac{a}{7} + \frac{a^2}{9}\right)\left(\frac{b}{2} - \frac{b^2}{3}\right) \\&= \left(-\frac{a}{7}\right)\left(\frac{b}{2} - \frac{b^2}{3}\right) + \left(\frac{a^2}{9}\right)\left(\frac{b}{2} - \frac{b^2}{3}\right) \\&= \left(-\frac{ab}{14} + \frac{ab^2}{21}\right) + \left(\frac{a^2b}{18} - \frac{a^2b^2}{27}\right) \\&= -\frac{ab}{14} + \frac{ab^2}{21} + \frac{a^2b}{18} - \frac{a^2b^2}{27}\end{aligned}$$

Thus, the answer is  $-\frac{ab}{14} + \frac{ab^2}{21} + \frac{a^2b}{18} - \frac{a^2b^2}{27}$ .

Algebraic Expressions and Identities Ex 6.5 Q14

**Answer :**

To multiply, we will use distributive law as follows:

$$\begin{aligned}& (3x^2y - 5xy^2)\left(\frac{1}{5}x^2 + \frac{1}{3}y^2\right) \\&= \frac{1}{5}x^2(3x^2y - 5xy^2) + \frac{1}{3}y^2(3x^2y - 5xy^2) \\&= \frac{3}{5}x^4y - x^3y^2 + x^2y^3 - \frac{5}{3}xy^4\end{aligned}$$

Thus, the answer is  $\frac{3}{5}x^4y - x^3y^2 + x^2y^3 - \frac{5}{3}xy^4$ .

Algebraic Expressions and Identities Ex 6.5 Q15

**Answer :**

To multiply, we will use distributive law as follows:

$$\begin{aligned}& (2x^2 - 1)(4x^3 + 5x^2) \\&= 2x^2(4x^3 + 5x^2) - 1(4x^3 + 5x^2) \\&= 8x^5 + 10x^4 - 4x^3 - 5x^2\end{aligned}$$

Thus, the answer is  $8x^5 + 10x^4 - 4x^3 - 5x^2$ .

\*\*\*\*\* END \*\*\*\*\*