

Multiplying Polynomials

Find each product.

1) $6v(2v+3)$

$6v(2v) + 6v(3)$

$12v^2 + 18v$

2) $7(-5v-8)$

$7(-5v) + 7(-8)$

$-35v - 56$

3) $2x(-2x-3)$

$2x(-2x) + 2x(-3)$

$-4x^2 - 6x$

4) $-4(v+1)$

$-4(v) - 4(1)$

$-4v - 4$

5) $(2n+2)(6n+1)$

$2n(6n+1) + 2(6n+1)$

$12n^2 + 2n + 12n + 2$

$12n^2 + 14n + 2$

6) $(4n+1)(2n+6)$

$$\begin{array}{r}
 4n + 1 \\
 2n \begin{array}{|c|c|} \hline 8n^2 & 2n \\ \hline \end{array} \\
 + 6 \begin{array}{|c|c|} \hline 24n & 6 \\ \hline \end{array}
 \end{array}$$

$8n^2 + 26n + 6$

7) $(x-3)(6x-2)$

$x(6x-2) - 3(6x-2)$

$6x^2 - 2x - 18x + 6$

$6x^2 - 20x + 6$

8) $(8p-2)(6p+2)$

$$\begin{array}{r}
 8p - 2 \\
 6p \begin{array}{|c|c|} \hline 48p^2 & -12p \\ \hline \end{array} \\
 + 2 \begin{array}{|c|c|} \hline 16p & -4 \\ \hline \end{array}
 \end{array}$$

$48p^2 + 4p - 4$

9) $(6p+8)(5p-8)$

$6p(5p-8) + 8(5p-8)$

$30p^2 - 48p + 40p - 64$

$30p^2 - 8p - 64$

10) $(3m-1)(8m+7)$

$$\begin{array}{r}
 3m - 1 \\
 8m \begin{array}{|c|c|} \hline 24m^2 & -8m \\ \hline \end{array} \\
 + 7 \begin{array}{|c|c|} \hline 21m & -7 \\ \hline \end{array}
 \end{array}$$

$24m^2 + 13m - 7$

11) $(2a-1)(8a-5)$

$2a(8a-5) - 1(8a-5)$

$16a^2 - 10a - 8a + 5$

$16a^2 - 18a + 5$

12) $(5n+6)(5n-5)$

$$\begin{array}{r}
 5n + 6 \\
 5n \begin{array}{|c|c|} \hline 25n^2 & 30n \\ \hline \end{array} \\
 - 5 \begin{array}{|c|c|} \hline -25n & -30 \\ \hline \end{array}
 \end{array}$$

$25n^2 + 5n - 30$