

Multiplying Polynomials

Name

Date

Period

Find each product.

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

$$12v^2 + 18v$$

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

$$-35v - 56$$

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

$$-4x^2 - 6x$$

4) $-4(v + 1)$

$$-4v - 4$$

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

$$\begin{array}{r} 12n^2 \\ 2n \\ 12n > 14n. \\ 2 \end{array}$$

$$12n^2 + 14n + 2$$

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

$$\begin{array}{r} 8n^2 \\ 24n \\ 2n > 26n. \\ 6 \end{array}$$

$$8n^2 + 26n + 6$$

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

$$\begin{array}{r} 6x^2 \\ -2x \\ -18x > -20x \\ +6 \end{array}$$

$$6x^2 - 20x + 6$$

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

$$\begin{array}{r} 48p^2 \\ 16p > 4p. \\ -12p \\ -4 \end{array}$$

$$48p^2 + 4p - 4$$

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

$$\begin{array}{r} 30p^2 \\ -48p > -8p. \\ +40p \\ -64 \end{array}$$

$$30p^2 - 8p - 64$$

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

$$\begin{array}{r} 24m^2 \\ 21m > 13m. \\ -8m \\ -7 \end{array}$$

$$24m^2 + 13m - 7$$

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

$$\begin{array}{r} 16a^2 \\ -10a > -18a. \\ -8a \\ +5 \end{array}$$

$$16a^2 - 18a + 5$$

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

$$\begin{array}{r} 25n^2 \\ -25n > 30n. \\ +30n \\ -30 \end{array}$$

$$25n^2 + 5n - 30$$

$$13) (4p-1)^2$$

$$(4p-1)(4p-1)$$

$$\begin{array}{r} 16p^2 \\ -4p > -8p \\ -4p \\ 1 \end{array} \quad 16p^2 - 8p + 1$$

$$15) (6n+3)(6n-4)$$

$$\begin{array}{r} 36n^2 \\ -24n > -6n \\ 18n \\ -12 \end{array} \quad 36n^2 - 6n - 12$$

$$17) (6k+5)(5k+5)$$

$$\begin{array}{r} 30k^2 \\ 30k > 55k \\ 25k \\ 25 \end{array} \quad 30k^2 + 55k + 25$$

$$19) (4a+2)(6a^2-a+2)$$

$$\begin{array}{r} 24a^3 - 4a^2 + 8a + 12a^2 - 2a + 4 \\ 24a^3 + 8a^2 + 6a + 4 \end{array}$$

$$21) (7r^2-6r-6)(2r-4)$$

$$\begin{array}{r} 14r^3 - 12r^2 - 12r - 28r^2 + 24r + 24 \\ 14r^3 - 40r^2 + 12r + 24 \end{array}$$

$$23) (6n^2-6n-5)(7n^2+6n-5)$$

$$\begin{array}{r} 42n^4 + 36n^3 - 30n^2 \\ -42n^3 - 36n^2 + 30n \\ -35n^2 - 30n + 25 \\ \hline 42n^4 - 6n^3 - 101n^2 + 25 \end{array}$$

$$14) (7x-6)(5x+6)$$

$$\begin{array}{r} 35x^2 \\ 42x > 12x \\ -30x \\ -36 \end{array} \quad 35x^2 + 12x - 36$$

$$16) (8n+1)(6n-3)$$

$$\begin{array}{r} 48n^2 \\ -24n > -18n \\ 6n \\ -3 \end{array} \quad 48n^2 - 18n - 3$$

$$18) (3x-4)(4x+3)$$

$$\begin{array}{r} 12x^2 \\ 9x > -7x \\ -16x \\ -12 \end{array} \quad 12x^2 - 7x - 12$$

$$20) (7k-3)(k^2-2k+7)$$

$$\begin{array}{r} 7k^3 - 14k^2 + 49k - 3k^2 + 6k - 21 \\ 7k^3 - 17k^2 + 55k - 21 \end{array}$$

$$22) (n^2+6n-4)(2n-4)$$

$$\begin{array}{r} 2n^3 + 12n^2 - 8n - 4n^2 - 24n + 16 \\ 2n^3 + 8n^2 - 32n + 16 \end{array}$$

$$24) (m^2-7m-6)(7m^2-3m-7)$$

$$\begin{array}{r} 7m^4 - 3m^3 - m^2 \\ -49m^3 + 21m^2 + 49m \\ -42m^2 + 18m + 42 \\ \hline 7m^4 - 52m^3 - 22m^2 + 67m + 42 \end{array}$$