

$$25) -5(4x - 2) = -2(3 + 6x)$$

{2}

$$26) 5(2x + 6) = -4(-5 - 2x) + 3x$$

{10}

1. Add or subtract the following polynomials and simplify.

(a) $(5x + 2) + (3x + 6)$

(b) $(9x - 8) - (2x + 1)$

(c) $(-7x^2 + x + 2) - (9x^2 + 6)$

(d) $(2x + 1) + (6x + 1)$

(e) $(6y + 4) + (2y + 12)$

(f) $(z - 16) + 7(3z + 6) - (2z + 1)$

(g) $(6z^2 + 2) + z(2z + 4) - 2(2z + 6)$

(h) $(7x^3 + 3x^2 - 2) + x^2(3x + 6)$

(i) $x(x^2 + 2) - 2x^2(3x + 6)$

(j) $(-12x^4 + 18x^2) + 3x^2(4x^2 - 6)$

2. Multiply and simplify the following expressions.

(a) $(x + 4)($

4. Divide.

(a) $(12x^3 - 11x^2 + 9x + 18) \div (4x + 3)$

(b) $(2x^4 - x^3 - 7x^2 - 3x + 10) \div (x - 2)$

(c) $(5x^3 - x^2 + 6) \div (x + 1)$

(d) $(x^4 + 4x$

Answers

1. (a) $8x + 8$ (b) $7x - 9$ (c) $-16x^2 + x - 8$ (d) $8x + 2$
(e) $8y + 16$ (f) $20z + 25$ (g) $8z^2 - 10$ (h) $10x^3 + 9x^2 - 2$
(i) $-5x^3 - 12x^2 + 2x$ (j) 0
2. (a) $x^3 + 2x^2 - 3x + 20$ (b) $8x^5 + 2x^4 - 32x^2 - 8x$ (c) $x + 8 \sqrt{x} + 12$
(d) $x - 1$ (e) $x^{3/2} + x$ (f) $z^{3/4} + z$
(g) $35z^4 + 24z^2 + 4$ (h) $x^2 - 12$ (i) $x - y^4$
(j) $4x^2 - 9$ (k) $25x^2 - 3$ (l) $4x^4 - y^4$
3. (a) $4b^2 + 4b + 1$ (b) $81 + 108x + 54x^2 + 12x^3 + x^4$
(c) $1 - 9m + 27m^2 - 27m^3$ (d) $y^3 + 6y^2 + 12y + 8$
(e) $y^4 - 16$



13) $b^2 - 6b + 8$

14) $n^2 + 6n + 8$

15) $2n^2 + 6n - 108$

16) $5n^2 + 10n + 20$

17) $2k^2 + 22k + 60$

18) $a^2 - a - 90$

19) $p^2 + 11p + 10$

20) $5v^2 - 30v + 40$

21) $2x^2 + 22x + 60$

22) $4m^2 - 40m + 100$

23) $x^2 - 15$

$$13) b^2 - 6b + 8$$

$$(b - 4)(b - 2)$$

$$14) n^2 + 6n + 8$$

$$(n + 2)(n + 4)$$

$$15) 2n^2 + 6n - 108$$

$$2(n + 9)(n - 6)$$

$$16) 5n^2 + 10n + 20$$

$$5(n^2 + 2n + 4)$$

$$17) 2k$$

$$11) n^2 + 8n = -15$$

$$\{-5, -3\}$$

$$12) 4r^2 - 44r$$

