

1.1 පොදු සාධක

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|-------------------------------|-------------------------------------|
| (a) $2x + 24$ | (b) $7x^2 + 5xy + 6x^3$ |
| (c) $ab^2 + 5b$ | (d) $xy + xz + x^2$ |
| (e) $a^3b + ab^3$ | (f) $5x^2y^3 - 15xy^2$ |
| (g) $4x(x - y) + 5y(x - y)$ | (h) $px - py + qx - qy$ |
| (i) $p^2 - ab + bp - ap$ | (j) $x^2y - 1 - x + xy$ |
| (k) $a(5x - y) - 10x + 2y$ | (l) $ms - 2nt^2 - ns + 2mt^2$ |
| (m) $(a - b)^2 - a + b$ | (n) $xy - 4 + 4y - x$ |
| (o) $x^2 - (a - b)x - ab$ | (p) $a(x + y) + b(y + x)$ |
| (q) $1 + 4x^3 + 2x + 2x^2$ | (r) $x(y - 2z) + z(2z - y)$ |
| (s) $5x^2y - 4a + 5ay - 4x^2$ | (t) $px + 2qx + ry - 2qy - py - rx$ |

1.2 වර්ග ප්‍රකාශන

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|--------------------------|-----------------------|---------------------------------|
| (i) (a) $5x^2 + 17x + 6$ | (b) $2x^2 + 13x + 20$ | (c) $2x^2 + 13xy + 15y^2$ |
| (d) $2x^2 + 5xy + 2y^2$ | (e) $4x^2 + 12x + 9$ | (f) $x^2 + 9x + 20$ |
| (g) $x^2 - 4xy + 4y^2$ | (h) $x^2 - 10x + 9$ | (i) $x^2 - 8x + 15$ |
| (j) $8x^2 - 26x + 15$ | (k) $2x^2 - 5x - 3$ | (l) $x^2 - 4x - 21$ |
| (m) $2x^2 + 7x + 3$ | (n) $2x^2 + 13x + 6$ | (o) $x^2 - 10x + 21$ |
| (p) $3x^2 - 10x + 8$ | (q) $6x^2 - 7x + 2$ | (r) $3x^3 - 21x^2 + 30x$ |
| (s) $15x^2 + 11x - 14$ | (t) $x^2 + 6x - 91$ | (u) $12x^2 + x - 6$ |
| (v) $x^2 - x - 56$ | (w) $7x^2 - 58x + 63$ | (x) $2x^3y - 30x^2y^2 + 28xy^3$ |

(ii)

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|--------------------------|--------------------------|---------------------------|
| (a) $y^2 + 8y + 15$ | (b) $a^2 + 8a + 12$ | (c) $2y^2 + 7y + 5$ |
| (d) $a^2 + 10a + 24$ | (e) $y^2 - 12y + 35$ | (f) $y^2 - 17y + 42$ |
| (g) $y^2 - 8y - 20$ | (h) $a^2 + 11ab + 24b^2$ | (i) $4y^2 - 13y + 3$ |
| (j) $y^2 - 6xy + 9x^2$ | (k) $a^2 + 4a + 3$ | (l) $m^2 - 12m + 36$ |
| (m) $8p^2 - 14pq + 3q^2$ | (n) $y^2 + 4y - 12$ | (o) $18y^2 - 9xy - 20x^2$ |
| (p) $y^2 - 4y - 21$ | (q) $p^2 - 5p - 24$ | (r) $p^2 - 6p + 5$ |
| (s) $y^2 + 4xy - 5x^2$ | (t) $y^2 + 8y + 12$ | (u) $x^2 - 14x + 45$ |
| (v) $p^2 - 9p + 14$ | (w) $y^2 - 11y - 60$ | (x) $2t^3 - 7t^2 + 5t$ |

(iii)

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|---------------------------|---------------------------|---------------------------|
| (a) $3m^2 + mn - 2n^2$ | (b) $a^2 + a - 2$ | (c) $x^2 + 4x - 12$ |
| (d) $3a^2 + 5ab + 2b^2$ | (e) $n^2 + 2n - 35$ | (f) $3xy^2 + xy - 10x$ |
| (g) $3k^2 + 4k - 4$ | (h) $a^2 + 7a - 44$ | (i) $x^2 + 2x - 24$ |
| (j) $a^2 - 2ab - 24b^2$ | (k) $15x^2 + x - 58$ | (l) $a^2 - 9a + 20$ |
| (m) $x^2 - 6xy - 7y^2$ | (n) $12a^2 - 7ab - 12b^2$ | (o) $2a^3 - a^2b - 3ab^2$ |
| (p) $10x^2 - 7xy - 12y^2$ | (q) $a^2 - 5a^2 - 84a$ | (r) $2p^2 - 11pq - 21q^2$ |
| (s) $p^2 - 4p - 21$ | (t) $x^2 - 7x - 228$ | (u) $6z^2 - 21z - 12$ |
| (v) $a^2 - a - 6$ | (w) $t^2 - 8t - 20$ | (x) $2x^2 - 3x - 5$ |

1.3 වර්ග දෙකක අන්තරය

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| (a) $y^2 - 49$ | (b) $2a^4b - 242b^3$ | (c) $81p^2q^2 - p$ |
| (d) $12y^3 - 75yz^2$ | (e) $7x^2 - 28$ | (f) $m^2n^2 - 16$ |
| (g) $8x^2 - 50y^2$ | (h) $x^2 - 0.04$ | (i) $5x^3 - 0.05x$ |
| (j) $p^3 - pq^2$ | (k) $-3m^2 + 75$ | (l) $x^2y^2 - 4a^2$ |
| (m) $x^4 - y^2$ | (n) $4x^2y^3 - 9y$ | (o) $4y^2 - \frac{1}{9}$ |

1.4 ඝන දෙකක ඵෙකය

(a) $x^3 + 27$

(b) $250 + 2x^3y^3$

(c) $x^3 + 0.125$

(d) $8p^4 - pq^3$

(e) $x^3y^3 + z^3$

(f) $x^3 + 125y^3$

(g) $343a^3 + 64$

(h) $7p^3 + 189$

(i) $5a^3b^3 + 40$

(j) $(xy)^3 + 8$

(k) $a^3 + 0.125$

(l) $x^6 + 8y^3$

(m) $\frac{x^3}{8} + \frac{y^3}{125}$

(n) $a^4b^4 + 216ab$

(o) $a^3 + \frac{1}{27}$

1.5 ඝන දෙකක අන්තරය

(a) $y^3 - 125$

(b) $(2x)^3 - (7)^3$

(c) $0.008 - x^3$

(d) $32 - 4x^3$

(e) $(4u^2)^3 - 1$

(f) $x^3y^3z^3 - 1$

(g) $64 - 0.027x^3$

(h) $(5u^2)^3 - 729$

(i) $6x^3 - 6$

(j) $27x^3 - 8y^3$

(k) $125 - (ab)^3$

(l) $27p^4q^4 - pq$

(m) $a^3b^4 - b$

(n) $\left(\frac{x}{y^2}\right)^3 - \frac{x^6}{y^3}$

(o) $x^3 - \frac{1}{8}$

1.6 විච්ඡේදනය

(i) (a) $\frac{3x}{4} - \frac{4x}{5} + \frac{x}{2}$

(b) $\frac{2x}{3} - \frac{3x}{4} - \frac{x}{2} + \frac{4x}{5}$

(c) $\frac{5x}{7} - \frac{(x-2)}{4} + \frac{(x-1)}{2}$

(d) $\frac{(3x-1)}{4} - \frac{(x-5)}{3}$

(e) $\frac{4x}{5} - \frac{(2x-1)}{3} + \frac{(x-2)}{4}$

(f) $\frac{(a+2b)}{5} + \frac{(3a+b)}{4} - \frac{b}{2}$

(g) $\frac{p+2-p^2}{4} + \frac{(p+3)^2}{3}$

(h) $\frac{q(q-1)}{5} + \frac{(q+6)}{4} - \frac{(a-1)}{2}$

(i) $\frac{(a-5)}{9} - \frac{(3a+2)^2}{4}$

(j) $\frac{x+2y^2}{7} - \frac{x^2+37}{3} + \frac{(x+y)^2}{2}$

(ii)

$$(a) \frac{3}{(x^2-9)} - \frac{5}{(x-3)^2}$$

$$(c) \frac{2}{(a^3-1)} + \frac{4}{(a-1)} + \frac{5}{(a^2+a+1)}$$

$$(e) \frac{2}{(x-1)(3x+1)} + \frac{1}{(2x-7)(x-1)}$$

$$(g) \frac{1}{(a-b)(b-c)} + \frac{2}{(c-a)(a-b)} + \frac{3}{(b-c)(c-a)}$$

$$(i) \frac{5}{x-1} + \frac{2}{1-x}$$

$$(k) \frac{2x}{(x^2-1)} - \frac{3x}{(x^2-x-2)}$$

$$(m) \frac{(4a^2+b^2)}{(4a^2-b^2)} + \frac{(2a-b)}{(2a+b)}$$

$$(o) \frac{x}{(x+y)} - \frac{y}{(y-x)} - \frac{1}{(x^2-y^2)}$$

$$(b) \frac{3}{(2x-1)} - \frac{2}{(3x+2)}$$

$$(d) \frac{2}{(x^2+x-2)} + \frac{3}{(x^2+3x+2)}$$

$$(f) \frac{4}{(x^2-1)} - \frac{5}{(x^2-x-2)}$$

$$(h) \frac{3}{(x^2-x+1)} - \frac{2}{(x^3+1)}$$

$$(j) \frac{1}{x-y} - \frac{1}{y-x} - \frac{1}{x^2-y^2}$$

$$(l) \frac{4}{(1+x)} - \frac{3}{(1-x)} - \frac{7x}{(x^2-1)}$$

$$(n) \frac{(x-2)}{(x+2)} - \frac{(x-3)}{(x^2+5x+6)}$$

$$(p) \frac{a}{(a-b)(x-a)} + \frac{b}{(a-b)(x-b)}$$

(iv)

$$(a) \frac{25}{(2x-3y)} \div \frac{20}{(8x-12y)}$$

$$(c) \frac{m+n}{m^2-n^2} \div \frac{m^3-n^3}{m^2-2mn+n^2}$$

$$(e) \frac{2a^2+ab-b^2}{a^2-b^2} \div \frac{2a^2-3ab+b^2}{(a-b)^2}$$

$$(b) \frac{25x^2-4y^2}{5x^2-7xy+2y^2} \div \frac{15x+6y}{x^4y-y^4x}$$

$$(d) \frac{3x^2y-3xy^2+3y^3}{(x-y)^2} \div \frac{(x^3+y^3)}{x^2-y^2}$$

$$(f) \frac{x^2-y^2}{x^3-y^3} \div \frac{x+y}{x^2+xy+y^2}$$