

=== Values of $X_{\{i\}}$ and $Y_{\{i\}}$ ===

└─值

X1 =

$$-\frac{1}{6} d1 (d1 - n) (-1 + n) n (2 - n + (-2 d1 + n)^2)$$

Y1 =

$$-\frac{1}{6} d2 (d2 - n) (-1 + n) n (2 - n + (-2 d2 + n)^2)$$

X2 =

$$-\frac{1}{90} d1 (d1 - n) (-1 + n) n (8 (4 + 10 d1^2 + d1^4) - 2 (14 + d1 (40 + d1 (15 + 8 d1))) n + (27 + 2 d1 (15 + 7 d1)) n^2 - 2 (4 + 3 d1) n^3 + n^4)$$

Y2 =

$$-\frac{1}{90} d2 (d2 - n) (-1 + n) n (8 (4 + 10 d2^2 + d2^4) - 2 (14 + d2 (40 + d2 (15 + 8 d2))) n + (27 + 2 d2 (15 + 7 d2)) n^2 - 2 (4 + 3 d2) n^3 + n^4)$$

X3 =

$$-\frac{1}{10080} d1 (d1 - n) (-1 + n) n (3408 + 64 d1^2 (154 + 28 d1^2 + d1^4) - 4 (961 + 4 d1 (616 + d1 (385 + 4 d1 (56 + d1 (7 + 3 d1)))) n + 8 (503 + d1 (770 + d1 (497 + 16 d1 (7 + 2 d1)))) n^2 - (1835 + 8 d1 (273 + 98 d1 + 24 d1^2)) n^3 + (461 + 8 d1 (42 + 11 d1)) n^4 - 3 (19 + 8 d1) n^5 + 3 n^6)$$

Y3 =

$$-\frac{1}{10080} d2 (d2 - n) (-1 + n) n (3408 + 64 d2^2 (154 + 28 d2^2 + d2^4) - 4 (961 + 4 d2 (616 + d2 (385 + 4 d2 (56 + d2 (7 + 3 d2)))) n + 8 (503 + d2 (770 + d2 (497 + 16 d2 (7 + 2 d2)))) n^2 - (1835 + 8 d2 (273 + 98 d2 + 24 d2^2)) n^3 + (461 + 8 d2 (42 + 11 d2)) n^4 - 3 (19 + 8 d2) n^5 + 3 n^6)$$

=== Solutions ===

(1 a) $\{d1 \rightarrow 0\}$

(2 a) $\{d2 \rightarrow 0\}$

(3 a) $\{d2 \rightarrow d1\}$

(4 a) $\{n \rightarrow 0\}$

(5 a) $\{n \rightarrow 1\}$

$$(6\ a) \{n \rightarrow d1\}$$

$$(7\ a) \{n \rightarrow d2\}$$

$$(8\ a) \{n \rightarrow d1 + d2\}$$

$$(9\ a) \{d1 \rightarrow 1, n \rightarrow 2\}$$

$$(10\ a) \{d2 \rightarrow 1, n \rightarrow 2\}$$

$$(11\ a) \{d1 \rightarrow 1, n \rightarrow 3\}$$

$$(12\ a) \{d1 \rightarrow 2, n \rightarrow 3\}$$

$$(13\ a) \{d2 \rightarrow 1, n \rightarrow 3\}$$

$$(14\ a) \{d2 \rightarrow 2, n \rightarrow 3\}$$

$$(15\ a) \{d1 \rightarrow 1, d2 \rightarrow 2, n \rightarrow 4\}$$

$$(16\ a) \{d1 \rightarrow 3, d2 \rightarrow 2, n \rightarrow 4\}$$

$$(17\ a) \{d1 \rightarrow 1, d2 \rightarrow 2, n \rightarrow 5\}$$

$$(18\ a) \{d1 \rightarrow 1, d2 \rightarrow 3, n \rightarrow 5\}$$

$$(19\ a) \{d1 \rightarrow 4, d2 \rightarrow 2, n \rightarrow 5\}$$

$$(20\ a) \{d1 \rightarrow 4, d2 \rightarrow 3, n \rightarrow 5\}$$

$$(21\ a) \left\{ d1 \rightarrow \frac{1}{2} \left(n - \sqrt{-10 + 3n - \sqrt{76 + 6(-7 + n)n}} \right), \right.$$

$$d2 \rightarrow \frac{n}{2} - \left(\sqrt{\left((-2 + n) \left(296 + 4\sqrt{76 + 6(-7 + n)n} + \right. \right. \right. \\ \left. \left. \left. n \left(-330 + 153n + 9\sqrt{76 + 6(-7 + n)n} - 6n\sqrt{76 + 6(-7 + n)n} + n^2 \left(-34 + 3n + \sqrt{76 + 6(-7 + n)n} \right) \right) \right) \right) \right) / \left(2 \left(14 + (-7 + n)n + \sqrt{76 + 6(-7 + n)n} \right) \right) \right\}$$

$$(22\ a) \left\{ d1 \rightarrow \frac{1}{2} \left(n - \sqrt{-10 + 3n - \sqrt{76 + 6(-7 + n)n}} \right), \right.$$

$$d2 \rightarrow \frac{n}{2} + \left(\sqrt{\left((-2 + n) \left(296 + 4\sqrt{76 + 6(-7 + n)n} + \right. \right. \right. \\ \left. \left. \left. n \left(-330 + 153n + 9\sqrt{76 + 6(-7 + n)n} - 6n\sqrt{76 + 6(-7 + n)n} + n^2 \left(-34 + 3n + \sqrt{76 + 6(-7 + n)n} \right) \right) \right) \right) \right) / \left(2 \left(14 + (-7 + n)n + \sqrt{76 + 6(-7 + n)n} \right) \right) \right\}$$

$$(23\ a) \left\{ d1 \rightarrow \frac{1}{2} \left(n + \sqrt{-10 + 3n - \sqrt{76 + 6(-7 + n)n}} \right), \right.$$

$$d2 \rightarrow \frac{n}{2} - \left(\sqrt{\left((-2 + n) \left(296 + 4\sqrt{76 + 6(-7 + n)n} + \right. \right. \right. \\ \left. \left. \left. n \left(-330 + 153n + 9\sqrt{76 + 6(-7 + n)n} - 6n\sqrt{76 + 6(-7 + n)n} + n^2 \left(-34 + 3n + \sqrt{76 + 6(-7 + n)n} \right) \right) \right) \right) \right) / \left(2 \left(14 + (-7 + n)n + \sqrt{76 + 6(-7 + n)n} \right) \right) \right\}$$

$$(24 \text{ a}) \left\{ d1 \rightarrow \frac{1}{2} \left(n + \sqrt{-10 + 3n - \sqrt{76 + 6(-7+n)n}} \right), \right.$$

$$d2 \rightarrow \frac{n}{2} + \left(\sqrt{\left((-2+n) \left(296 + 4\sqrt{76 + 6(-7+n)n} + n \left(-330 + 153n + 9\sqrt{76 + 6(-7+n)n} - 6n\sqrt{76 + 6(-7+n)n} + n^2 \left(-34 + 3n + \sqrt{76 + 6(-7+n)n} \right) \right) \right) \right) \right) / \left(2 \left(14 + (-7+n)n + \sqrt{76 + 6(-7+n)n} \right) \right) \right\}$$

$$(25 \text{ a}) \left\{ d1 \rightarrow \frac{1}{2} \left(n - \sqrt{-10 + 3n + \sqrt{76 + 6(-7+n)n}} \right), \right.$$

$$d2 \rightarrow \frac{n}{2} + \left(\sqrt{\left((-2+n) \left(296 - 4\sqrt{76 + 6(-7+n)n} + n \left(-330 + 3n^3 - 9\sqrt{76 + 6(-7+n)n} - n^2 \left(34 + \sqrt{76 + 6(-7+n)n} \right) + 3n \left(51 + 2\sqrt{76 + 6(-7+n)n} \right) \right) \right) \right) \right) / \left(2 \left(-14 - (-7+n)n + \sqrt{76 + 6(-7+n)n} \right) \right) \right\}$$

$$(26 \text{ a}) \left\{ d1 \rightarrow \frac{1}{2} \left(n - \sqrt{-10 + 3n + \sqrt{76 + 6(-7+n)n}} \right), \right.$$

$$d2 \rightarrow \frac{n}{2} - \left(\sqrt{\left((-2+n) \left(296 - 4\sqrt{76 + 6(-7+n)n} + n \left(-330 + 3n^3 - 9\sqrt{76 + 6(-7+n)n} - n^2 \left(34 + \sqrt{76 + 6(-7+n)n} \right) + 3n \left(51 + 2\sqrt{76 + 6(-7+n)n} \right) \right) \right) \right) \right) / \left(2 \left(-14 - (-7+n)n + \sqrt{76 + 6(-7+n)n} \right) \right) \right\}$$

$$(27 \text{ a}) \left\{ d1 \rightarrow \frac{1}{2} \left(n + \sqrt{-10 + 3n + \sqrt{76 + 6(-7+n)n}} \right), \right.$$

$$d2 \rightarrow \frac{n}{2} + \left(\sqrt{\left((-2+n) \left(296 - 4\sqrt{76 + 6(-7+n)n} + n \left(-330 + 3n^3 - 9\sqrt{76 + 6(-7+n)n} - n^2 \left(34 + \sqrt{76 + 6(-7+n)n} \right) + 3n \left(51 + 2\sqrt{76 + 6(-7+n)n} \right) \right) \right) \right) \right) / \left(2 \left(-14 - (-7+n)n + \sqrt{76 + 6(-7+n)n} \right) \right) \right\}$$

$$(28 \text{ a}) \left\{ d1 \rightarrow \frac{1}{2} \left(n + \sqrt{-10 + 3n + \sqrt{76 + 6(-7+n)n}} \right), \right.$$

$$d2 \rightarrow \frac{n}{2} - \left(\sqrt{\left((-2+n) \left(296 - 4\sqrt{76 + 6(-7+n)n} + n \left(-330 + 3n^3 - 9\sqrt{76 + 6(-7+n)n} - n^2 \left(34 + \sqrt{76 + 6(-7+n)n} \right) + 3n \left(51 + 2\sqrt{76 + 6(-7+n)n} \right) \right) \right) \right) \right) / \left(2 \left(-14 - (-7+n)n + \sqrt{76 + 6(-7+n)n} \right) \right) \right\}$$