數學計算練習 - 詳解

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第 1 回詳解

1. $\sqrt{26+8\sqrt{3}}$
$=\sqrt{24+2+2\sqrt{24\times 2}}$
$=\sqrt{(\sqrt{24}+\sqrt{2})^2}$
$=|\sqrt{24}+\sqrt{2}|$
$=\sqrt{24}+\sqrt{2}$

2. $\sqrt{41+6\sqrt{46}}$
$=\sqrt{23+18+2\sqrt{23\times 18}}$
$=\sqrt{(\sqrt{23}+\sqrt{18})^2}$
$=|\sqrt{23}+\sqrt{18}|$
$=\sqrt{23}+\sqrt{18}$

3. $\sqrt{14-2\sqrt{13}}$
$=\sqrt{13+1-2\sqrt{13\times 1}}$
$=\sqrt{(\sqrt{13}-\sqrt{1})^2}$
$=|\sqrt{13}-\sqrt{1}|$
$=\sqrt{13}-\sqrt{1}$

4. $\sqrt{25-2\sqrt{66}}$
$=\sqrt{22+3-2\sqrt{22\times 3}}$
$=\sqrt{(\sqrt{22}-\sqrt{3})^2}$
$=|\sqrt{22}-\sqrt{3}|$
$=\sqrt{22}-\sqrt{3}$

5. $\sqrt{14-6\sqrt{5}}$
$=\sqrt{9+5-2\sqrt{9\times 5}}$
$=\sqrt{(\sqrt{9}-\sqrt{5})^2}$
$=|\sqrt{9}-\sqrt{5}|$
$=\sqrt{9}-\sqrt{5}$

6. $\sqrt{40-2\sqrt{399}}$
$=\sqrt{21+19-2\sqrt{21\times 19}}$
$=\sqrt{(\sqrt{21}-\sqrt{19})^2}$
$=|\sqrt{21}-\sqrt{19}|$
$=\sqrt{21}-\sqrt{19}$

7. $\sqrt{23+2\sqrt{130}}$
$=\sqrt{13+10+2\sqrt{13\times 10}}$
$=\sqrt{(\sqrt{13}+\sqrt{10})^2}$
$=|\sqrt{13}+\sqrt{10}|$
$=\sqrt{13}+\sqrt{10}$

8. $\sqrt{21-4\sqrt{26}}$
$=\sqrt{13+8-2\sqrt{13\times 8}}$
$=\sqrt{(\sqrt{13}-\sqrt{8})^2}$
$=|\sqrt{13}-\sqrt{8}|$
$=\sqrt{13}-\sqrt{8}$

9. $\sqrt{33+2\sqrt{266}}$
$=\sqrt{19+14+2\sqrt{19\times 14}}$
$=\sqrt{(\sqrt{19}+\sqrt{14})^2}$
$=|\sqrt{19}+\sqrt{14}|$
$=\sqrt{19}+\sqrt{14}$

10. $\sqrt{24+6\sqrt{7}}$
$=\sqrt{21+3+2\sqrt{21\times 3}}$
$=\sqrt{(\sqrt{21}+\sqrt{3})^2}$
$=|\sqrt{21}+\sqrt{3}|$
$=\sqrt{21}+\sqrt{3}$

11. $\sqrt{23+8\sqrt{7}}$
$=\sqrt{16+7+2\sqrt{16\times 7}}$
$=\sqrt{(\sqrt{16}+\sqrt{7})^2}$
$=|\sqrt{16}+\sqrt{7}|$
$=\sqrt{16}+\sqrt{7}$

12. $\sqrt{30+6\sqrt{21}}$
$=\sqrt{21+9+2\sqrt{21\times 9}}$
$=\sqrt{(\sqrt{21}+\sqrt{9})^2}$
$=|\sqrt{21}+\sqrt{9}|$
$=\sqrt{21}+\sqrt{9}$

13. $\sqrt{17+4\sqrt{13}}$
$=\sqrt{13+4+2\sqrt{13\times 4}}$
$=\sqrt{(\sqrt{13}+\sqrt{4})^2}$
$=|\sqrt{13}+\sqrt{4}|$
$=\sqrt{13}+\sqrt{4}$

14. $\sqrt{22+4\sqrt{30}}$
$=\sqrt{12+10+2\sqrt{12\times 10}}$
$=\sqrt{(\sqrt{12}+\sqrt{10})^2}$
$=|\sqrt{12}+\sqrt{10}|$
$=\sqrt{12}+\sqrt{10}$

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