Bell work

1) $\sqrt[5]{-32x^5y^{30}z^{45}}$

$-2xy^6z^9$

(2) $\sqrt{x^7y^4}$

$\sqrt{x^6}\sqrt{x}\sqrt{y^4}$

$x^3y^2\sqrt{x}$

(3) $\sqrt[3]{x^2y^{14}}$

$\sqrt[3]{x^2}\ \sqrt[3]{y^{12}}\sqrt[3]{y^2}$

$y^4\sqrt[3]{x^2y^2}$

(4) $\sqrt[4]{x^9y^{15}}$

$\sqrt[4]{x^8}\ \sqrt[4]{x}$

$\sqrt[4]{y^{12}}\ \sqrt[4]{y^3}$

$x^2y^3\sqrt[4]{xy^3}$

Multiplying Radical Expressions

Ex1) $3\sqrt{12} \cdot \sqrt{16}$

$3\sqrt{4}\sqrt{3} \cdot 4$

$3(2)\sqrt{3} \cdot 4$

$6\sqrt{3} \cdot 4$

$24\sqrt{3}$

$= 3\sqrt{192}$

$3\sqrt{64}\sqrt{3}$

$3(8)\sqrt{3} = 24\sqrt{3}$

Ex2) $\sqrt{6} \cdot \sqrt{6}$

$\sqrt{36}$

6

3) $-4\sqrt{15} \cdot -\sqrt{3}$

$4\sqrt{45}$

$4\sqrt{9}\sqrt{5}$

$4(3)\sqrt{5} = 12\sqrt{5}$

4) $-3\sqrt{3}(2+\sqrt{6})$

$-6\sqrt{3} \quad -3\sqrt{18}$

$-6\sqrt{3} \quad -3\sqrt{9}\sqrt{2} \rightarrow -3(3)\sqrt{2}$

$-6\sqrt{3} \quad -9\sqrt{2}$

5) $-2\sqrt{15}(-3\sqrt{3}+3\sqrt{5})$

$6\sqrt{45} - 6\sqrt{75}$

$6\sqrt{9}\sqrt{5} - 6\sqrt{25}\sqrt{3}$

$18\sqrt{5} - 30\sqrt{3}$

$6\sqrt{9}\sqrt{5}$

$6(3)\sqrt{5}$

6) $(-2\sqrt{3}-3\sqrt{5})(5-\sqrt{5})$

$-10\sqrt{3} + 2\sqrt{15} - 15\sqrt{5} + 3(5)$

$-10\sqrt{3} + 2\sqrt{15} - 15\sqrt{5} + 15$

7) $(5\sqrt{2x}+\sqrt{5})(-4\sqrt{2x}+\sqrt{5})$

$-20(2x)+5\sqrt{10x}-4\sqrt{10x}+5$

$-40x+\sqrt{10x}+5$