KM **K**im's **M**aths	Stage 16	www.cyberschool.co.kr

☺ *Evaluate the following.*

(1) $\sqrt{3}+\sqrt{3}$

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

(3) $7\sqrt{2}+3\sqrt{18}$

(4) $8\sqrt{8}+3\sqrt{32}$

(5) $11\sqrt{80}+12\sqrt{20}$

☺ *Evaluate the following.*

(6) $4\sqrt{5}+2\sqrt{5}+2\sqrt{5}$

(7) $3\sqrt{3}+5\sqrt{27}+\sqrt{81}$

(8) $7\sqrt{2}+3\sqrt{2}+2\sqrt{5}+4\sqrt{5}$

(9) $3\sqrt{18}+2\sqrt{27}+2\sqrt{8}+2\sqrt{50}$

(10) $\sqrt{60}+5\sqrt{15}+6\sqrt{12}+2\sqrt{48}$

☺ *Evaluate the following.*

(11) $5\sqrt{2} - 2\sqrt{2}$

(12) $7\sqrt{5} - 10\sqrt{5}$

(13) $9\sqrt{3} - 6\sqrt{27}$

(14) $4\sqrt{8} - 2\sqrt{32}$

(15) $10\sqrt{32} - 15\sqrt{18}$

☺ *Evaluate the following.*

(16) $8\sqrt{5} - 12\sqrt{75} + 4\sqrt{125}$

(17) $9\sqrt{64} - 5\sqrt{32} - 2\sqrt{8}$

(18) $9\sqrt{2} - 5\sqrt{2} + 12\sqrt{5} - 4\sqrt{5}$

(19) $6\sqrt{108} - 7\sqrt{80} + 2\sqrt{20} - 4\sqrt{75}$

(20) $2\sqrt{44} - 5\sqrt{63} - 3\sqrt{99} - 4\sqrt{28}$

☺ *Simplify the following.*

(21) $\sqrt{a}+\sqrt{a}$

(22) $2\sqrt{b}+4\sqrt{b}$

(23) $5\sqrt{c^2}+2\sqrt{4c^2}$

(24) $7\sqrt{9x^4}+3\sqrt{16x^4}$

(25) $4\sqrt{25y^{10}}+6\sqrt{36y^{10}}$

☺ *Simplify the following.*

(26) $3\sqrt{m^3}+7\sqrt{m^3}+2\sqrt{4m^3}$

(27) $5\sqrt{a^2b^2}+\sqrt{100a^2b^2}+2\sqrt{64a^2b^2}$

(28) $7\sqrt{a}+5\sqrt{b}+4\sqrt{a}+5\sqrt{b}$

(29) $3\sqrt{9x^2}+4\sqrt{16x^2}+3\sqrt{4x^4}+4\sqrt{25x^4}$

(30) $\sqrt{9m^2x^3}+\sqrt{m^2x^3}+\sqrt{4m^3x^2}+\sqrt{m^3x^2}$

☺ *Simplify the following.*

(31) $5\sqrt{s} - 2\sqrt{s}$

(32) $6\sqrt{t} - 3\sqrt{t}$

(33) $8\sqrt{d^2} - 3\sqrt{9d^2}$

(34) $4\sqrt{16y^4} - 2\sqrt{25y^4}$

(35) $4\sqrt{36m^6} - 9\sqrt{4m^6}$

☺ *Simplify the following.*

(36) $6\sqrt{9a^3} - 7\sqrt{4a^3} - 2\sqrt{36a^3}$

(37) $3\sqrt{144h^2k^2} - 2\sqrt{81h^2k^2} - 3\sqrt{4h^2k^2}$

(38) $13\sqrt{a} - 5\sqrt{b} - 5\sqrt{a} + 9\sqrt{b}$

(39) $\sqrt{400m^4} - 2\sqrt{9m^4} - 3\sqrt{4x^4} - 3\sqrt{36x^4}$

(40) $\sqrt{4s^2t^3} - \sqrt{49s^2t^3} + \sqrt{4s^3t^2} - \sqrt{9s^3t^2}$

☺ *Rationalise the following.*

(41) $\frac{3}{\sqrt{2}}$

(42) $\frac{2}{\sqrt{6}}$

(43) $\frac{14}{\sqrt{7}}$

(44) $\frac{3\sqrt{5}}{\sqrt{3}}$

(45) $\frac{\sqrt{44}}{\sqrt{12}}$

☺ *Rationalise the following.*

(46) $\frac{3}{\sqrt{a}}$

(47) $\frac{\sqrt{27}}{\sqrt{b}}$

(48) $\frac{2\sqrt{a}}{\sqrt{m}}$

(49) $\frac{\sqrt{18n}}{3\sqrt{mn^2}}$

(50) $\frac{\sqrt{12x^4y}}{2\sqrt{xy^2}}$

☺ *Rationalise the following.*

(51) $\frac{3}{\sqrt{5}-\sqrt{2}}$

(52) $\frac{2\sqrt{2}}{\sqrt{11}+\sqrt{5}}$

(53) $\frac{\sqrt{2}}{\sqrt{8}-3}$

(54) $\frac{4}{2\sqrt{3}-\sqrt{2}}$

(55) $\frac{\sqrt{24}}{\sqrt{18}+4}$

☺ *Rationalise the following.*

(56) $\frac{5}{\sqrt{x}-\sqrt{2}}$

(57) $\frac{2(a-b)}{\sqrt{a}-\sqrt{b}}$

(58) $\frac{3(2m-4n)}{\sqrt{2m}+\sqrt{4n}}$

(59) $\frac{4}{\sqrt{h}-k}$

(60) $\frac{7(a-b^2)}{\sqrt{a}-b}$