

Exercice 1.1 :

Ecrire A, B, C, D, E, F, G, H sous la forme  $a\sqrt{b}$ .

$$A = -7\sqrt{252}$$

$$B = 3\sqrt{72}$$

$$C = 7\sqrt{80}$$

$$D = -2\sqrt{8}$$

$$E = -7\sqrt{18}$$

$$F = -7\sqrt{12}$$

$$G = -8\sqrt{150}$$

$$H = -2\sqrt{20}$$

(Solutions :

$$A = -42\sqrt{7} \quad B = 18\sqrt{2} \quad C = 28\sqrt{5} \quad D = -4\sqrt{2}$$

$$E = -21\sqrt{2} \quad F = -14\sqrt{3} \quad G = -40\sqrt{6} \quad H = -4\sqrt{5}$$

)

Exercice 1.2 :

Ecrire A, B, C, D, E, F, G, H sous la forme  $a\sqrt{b}$ .

$$A = 8\sqrt{147}$$

$$B = 6\sqrt{250}$$

$$C = -8\sqrt{48}$$

$$D = 5\sqrt{180}$$

$$E = 6\sqrt{8}$$

$$F = -5\sqrt{63}$$

$$G = 8\sqrt{147}$$

$$H = -4\sqrt{54}$$

(Solutions :

$$A = 56\sqrt{3} \quad B = 30\sqrt{10} \quad C = -32\sqrt{3} \quad D = 30\sqrt{5}$$

$$E = 12\sqrt{2} \quad F = -15\sqrt{7} \quad G = 56\sqrt{3} \quad H = -12\sqrt{6}$$

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Exercice 1.3 :

Ecrire A, B, C, D, E, F, G, H sous la forme  $a\sqrt{b}$ .

$$A = 5\sqrt{54}$$

$$B = 4\sqrt{28}$$

$$C = 2\sqrt{343}$$

$$D = -6\sqrt{245}$$

$$E = 6\sqrt{343}$$

$$F = 6\sqrt{72}$$

$$G = -4\sqrt{360}$$

$$H = -8\sqrt{160}$$

(Solutions :

$$A = 15\sqrt{6} \quad B = 8\sqrt{7} \quad C = 14\sqrt{7} \quad D = -42\sqrt{5}$$

$$E = 42\sqrt{7} \quad F = 36\sqrt{2} \quad G = -24\sqrt{10} \quad H = -32\sqrt{10}$$

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Exercice 1.4 :

Ecrire A, B, C, D, E, F, G, H sous la forme  $a\sqrt{b}$ .

$$A = 2\sqrt{24} - 2\sqrt{216}$$

$$B = 2\sqrt{294} + 3\sqrt{24}$$

$$C = 3\sqrt{147} - 6\sqrt{27}$$

$$D = -4\sqrt{160} + 6\sqrt{250}$$

$$E = \sqrt{45} + 3\sqrt{180}$$

$$F = 5\sqrt{20} - 3\sqrt{180}$$

$$G = 5\sqrt{8} + 3\sqrt{50}$$

$$H = \sqrt{245} + 6\sqrt{20}$$

(Solutions :

$$A = -8\sqrt{6} \quad B = 20\sqrt{6} \quad C = 3\sqrt{3} \quad D = 14\sqrt{10}$$

$$E = 21\sqrt{5} \quad F = -8\sqrt{5} \quad G = 25\sqrt{2} \quad H = 19\sqrt{5}$$

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Exercice 1.5 :

Ecrire A, B, C, D, E, F, G, H sous la forme  $a\sqrt{b}$ .

$$A = -4\sqrt{80} - 3\sqrt{180} + 6\sqrt{20}$$

$$B = 4\sqrt{5} + \sqrt{20} + 3\sqrt{80}$$

$$C = 3\sqrt{24} - 2\sqrt{96} - \sqrt{216}$$

$$D = 4\sqrt{27} - 6\sqrt{12} - 3\sqrt{75}$$

$$E = \sqrt{32} + 4\sqrt{50} + 2\sqrt{8}$$

$$F = \sqrt{5} + 6\sqrt{180} + 3\sqrt{80}$$

$$G = -4\sqrt{5} - \sqrt{180} + 4\sqrt{80}$$

$$H = -6\sqrt{2} + 2\sqrt{50} + \sqrt{18}$$

(Solutions :

$$A = -22\sqrt{5} \quad B = 18\sqrt{5} \quad C = -8\sqrt{6} \quad D = -15\sqrt{3}$$

$$E = 28\sqrt{2} \quad F = 49\sqrt{5} \quad G = 6\sqrt{5} \quad H = 7\sqrt{2}$$

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Exercice 1.6 :

Ecrire A, B, C, D, E, F, G, H sous la forme  $a\sqrt{b}$ .

$$A = 5\sqrt{54} + 4\sqrt{216} - 4\sqrt{96} + 3\sqrt{6}$$

$$B = -4\sqrt{108} + 2\sqrt{3} + 5\sqrt{75} + 5\sqrt{27}$$

$$C = 5\sqrt{27} + 3\sqrt{48} - 5\sqrt{3} + \sqrt{75}$$

$$D = -5\sqrt{6} + 3\sqrt{54} + 5\sqrt{24} + \sqrt{96}$$

$$E = -\sqrt{24} - 5\sqrt{6} - 2\sqrt{216} + 5\sqrt{96}$$

$$F = 2\sqrt{27} + 5\sqrt{75} - 4\sqrt{48} + 4\sqrt{108}$$

$$G = 5\sqrt{6} + \sqrt{24} + 3\sqrt{216} - 3\sqrt{54}$$

$$H = 5\sqrt{5} + \sqrt{125} - 3\sqrt{80} - 5\sqrt{45}$$

(Solutions :

$$A = 26\sqrt{6} \quad B = 18\sqrt{3} \quad C = 27\sqrt{3} \quad D = 18\sqrt{6}$$

$$E = \sqrt{6} \quad F = 39\sqrt{3} \quad G = 16\sqrt{6} \quad H = -17\sqrt{5}$$

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