

تمرين 1

(1) احسب ما يلي:

$$a = (3 - \sqrt{5})^2 \quad b = (2\sqrt{3} + 3\sqrt{2})^2$$

$$c = (\sqrt{2} + 4)^2 \quad d = \left(\frac{\sqrt{2}}{\sqrt{3} + \sqrt{2}}\right)^{-2}$$

$$e = (1 + \sqrt{2} - \sqrt{7})(1 - \sqrt{2} + \sqrt{7})$$

$$f = \sqrt{2}(\sqrt{3} - \sqrt{2}) + \sqrt{3}(\sqrt{3} - \sqrt{2}) - 1$$

$$i = (\sqrt{5} - 1)^2 - 2(\sqrt{5} + 1)^2 + 6\sqrt{5}$$

$$j = (\sqrt{147} + \sqrt{162})(7\sqrt{3} - 9\sqrt{2})\sqrt{2}$$

(2) بسط مايلي:

$$A = 3\sqrt{80} - 2\sqrt{45} + \sqrt{20}$$

$$B = \sqrt{32} + 3\sqrt{2} - \sqrt{72}$$

$$C = 2\sqrt{\frac{3}{4}} + \sqrt{27} + \frac{1}{2}\sqrt{12} - 3\sqrt{\frac{75}{9}}$$

$$D = \sqrt{0,98} + \sqrt{9a} + 2\sqrt{a} - \frac{7}{5}\sqrt{25a}$$

$$D = \sqrt{0,98} + \sqrt{1,62} - 4\sqrt{0,72}$$

$$E = \sqrt{4a} + \sqrt{9a} + 2\sqrt{a} - \frac{7}{5}\sqrt{25a}$$

" حيث a عدد حقيقي موجب "

$$F = \sqrt{5^2 + 3^2 + 4^2} - 1$$

$$H = \sqrt{3 \times 5^2 \times 7 \times 21}$$

$$I = \frac{\sqrt{0,0032}}{\sqrt{0,18}} ; J = \frac{\sqrt{49 \times 10^8}}{\sqrt{10000}}$$

(1) ليكن x عددا حقيقيا بحيث :

$$x^2 + \frac{1}{x^2} + x + \frac{1}{x} = \sqrt{3} \quad (x \neq 0 \text{ مع})$$