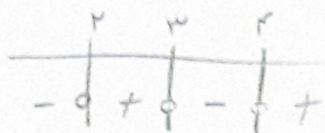
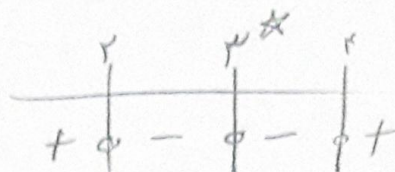




$$\text{الف) } y = (x-2)(x-3)(x-4)$$

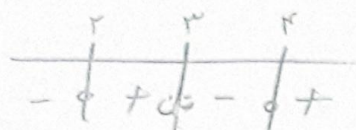


$$\text{ب) } y = (x-2)(x-3)^2(x-4)$$

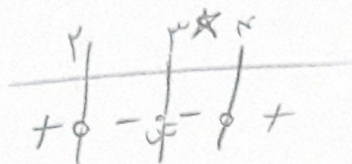


9

$$\text{الف) } y = \frac{(x-2)(x-4)}{x-3}$$

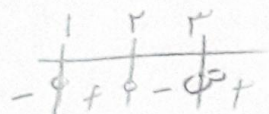


$$\text{ب) } y = \frac{(x-2)(x-4)}{(x-3)^2}$$

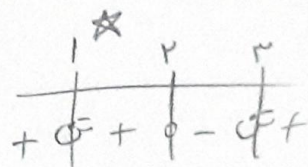


V

$$\text{الف) } y = \frac{x^2-3x+2}{x-3} = \frac{(x-2)(x-1)}{x-3}$$



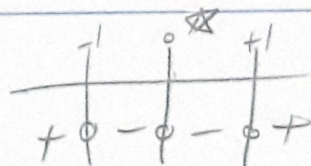
$$\text{ب) } y = \frac{x^2-3x+2}{x^2-4x+3} = \frac{(x-1)(x-2)}{(x-1)(x-3)}$$



Λ

$$\text{الف) } y = \frac{x^2-x^2}{x^2+x+2} = \frac{(x^2-x)(x^2+x)}{x^2+x+2} = \frac{(x(x-1))(x(x+1))}{x^2+x+2}$$

$$\Delta = \sqrt{(1)^2 - 4(2 \times 1)} = \sqrt{-7}$$

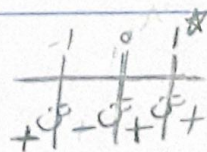


$$\text{ب) } y = \frac{x^2+3x+2}{x^2+2x+2} \rightarrow \left. \begin{array}{l} \Delta = \sqrt{(3)^2 - 4(2 \times 1)} = \sqrt{-1} \\ \Delta = \sqrt{(2)^2 - 4(1 \times 1)} = \sqrt{-1} \end{array} \right\}$$

العدد مركب  
= غير حقيقي

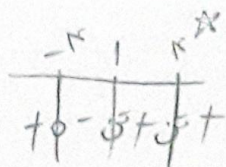
9

$$\text{الف) } y = \sqrt{\frac{x^2-1}{x^2-x}} = \sqrt{\frac{x^2-1}{x(x-1)}} = \sqrt{\frac{x^2-1}{x(x-1)(x+1)}}$$



$$D = (-\infty, -1) \cup (0, 1) \cup (1, \infty)$$

$$\text{ب) } y = \sqrt{\frac{x^2-16}{x^2-9x+14}} = \sqrt{\frac{(x-4)(x+4)}{(x-7)(x-2)}}$$



$$D = (-\infty, 2] \cup (4, 7) \cup (7, +\infty)$$

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