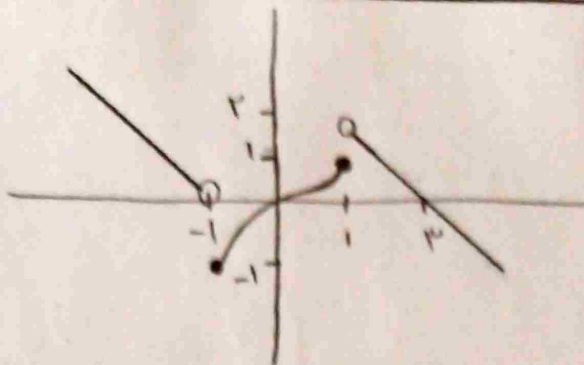
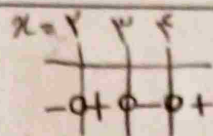


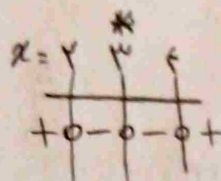
۲ ✓



الف) $y = (x-2)(x-3)(x-4)$
 $2 \leftarrow \quad 3 \leftarrow \quad 4 \leftarrow$

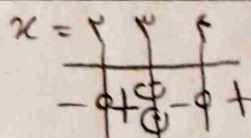


ب) $y = (x-2)(x-3)^2(x-4)$
 $2 \leftarrow \quad 3 \leftarrow \quad 4 \leftarrow$

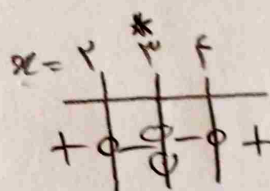


۲ ✓

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

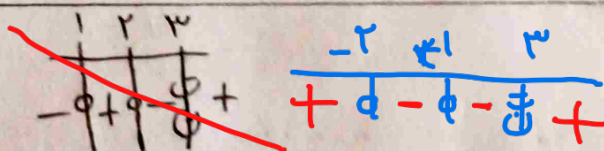


ب) $y = \frac{(x-2)(x-4)}{(x-3)^2}$
 $2 \leftarrow \quad 3 \leftarrow \quad 4 \leftarrow$

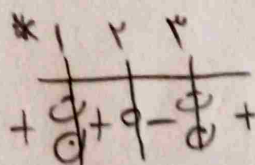


۲ ✓

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

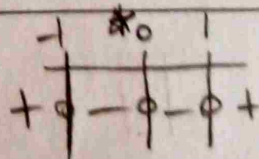


ب) $y = \frac{(x-1)(x-2)}{(x-1)(x-3)}$
 $1 \leftarrow \quad 2 \leftarrow \quad 3 \leftarrow$



۱

الف) $y = \frac{x^2(x^2-1)}{x^2+x+2} = \frac{x^2(x-1)(x+1)}{x^2+x+2}$
 $x^2+x+2 \rightarrow \Delta = 1^2 - 4 \times 2 \times 1 = -7$ ریشه ندارد



۲ ✓

ب) $y = \frac{x^2+3x+4}{x^2+2x+2} \rightarrow \Delta = 9-16 \rightarrow$ منفی ریشه ندارد
 $\Delta = 4-12 \rightarrow$ منفی ریشه ندارد

همیشه مثبت

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