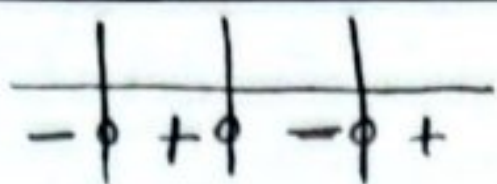
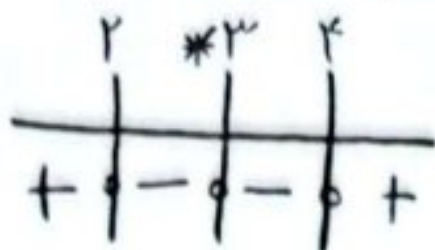


$$1) (x-2)(x-3)(x-5)$$

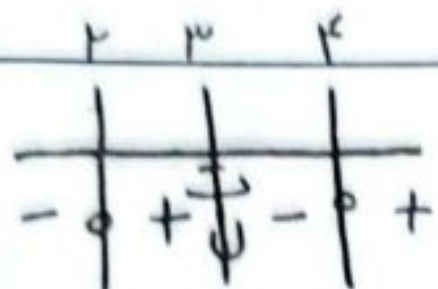


$$2) (x-2)(x-3)^2(x-5)$$



2
4

$$1) \frac{(x-2)(x-5)}{x-3} \Rightarrow$$

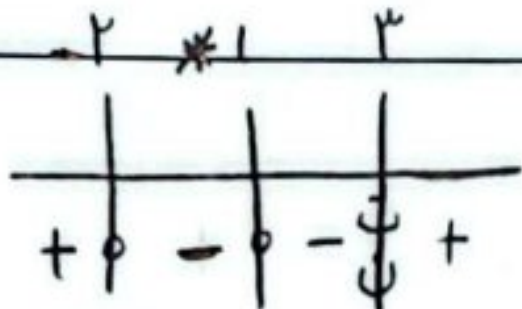


$$2) \frac{(x-2)(x-5)}{(x-3)^2} \Rightarrow$$

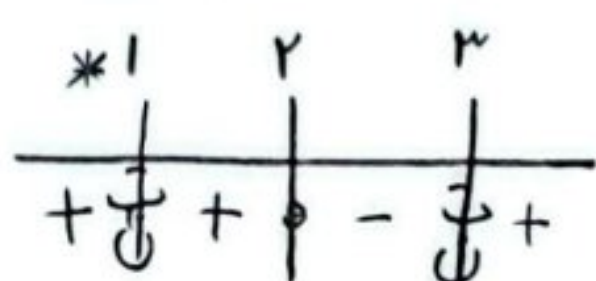


2
7

$$1) \frac{x^2-3x+2}{x-3} = \frac{(x-1)^2(x+2)}{x-3} \Rightarrow$$



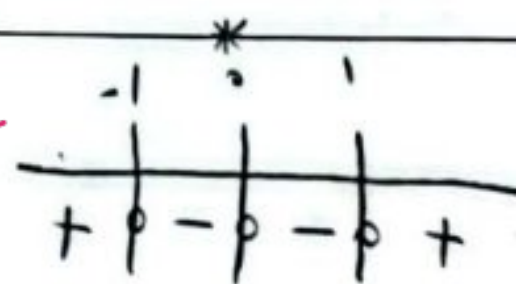
$$2) \frac{x^2-3x+2}{x^2-5x+6} = \frac{(x-2)(x-1)}{(x-3)(x-2)} \Rightarrow$$



2
1

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

$$b^2-4ac = 1-4 = -3$$



چون Δ منفی است مخرج مثبت

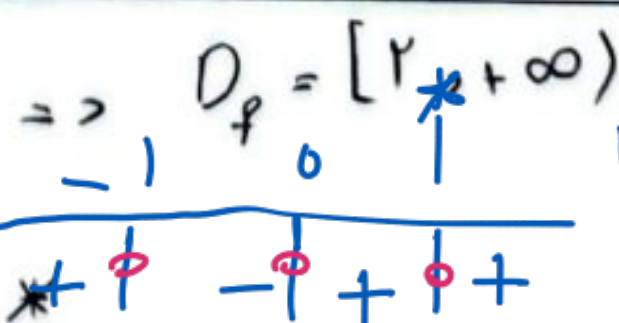
$$2) \frac{x^2+3x+2}{x^2+2x+3} = \frac{x^2+3x+2=0 \quad \Delta=9-4=-5}{x^2+2x+3=0 \quad \Delta=4-12=-8}$$

حاصل صورت، مخرج همواره مثبت است

2
9

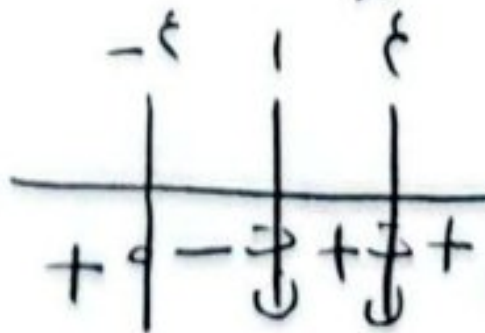
$$1) \sqrt{\frac{x^2-1}{x^2-x}} = \frac{x^2-1 \geq 0}{x^2-x > 0} \Rightarrow \frac{x^2 \geq 1}{x^2 > x} \Rightarrow \frac{x \geq 1}{x > 1}$$

$$\frac{(x-1)(x+1)}{x(x-1)(x+1)} \geq 0$$



$$D_f = (-\infty, -1) \cup (0, +\infty) \cup (1, +\infty)$$

$$2) \sqrt{\frac{x^2-14}{x^2-8x+4}} = \frac{(x-4)(x+4)}{(x-4)(x-1)}$$



$$D_f = (-\infty, -4] \cup (1, 4) \cup (4, +\infty)$$

1, 2
10