

نام و نام خانوادگی ..... شماره ..... کلاس ..... دبیر ..... B

|                                                                                                                                                                                                                                                                         |                                                                          |                                                                                                                            |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---|
| الف) $y^3 - x = 2x^2$<br>$\rightarrow x=1 \rightarrow y^3 - 1 = 2$<br>$y^3 = 3 \rightarrow y = \sqrt[3]{3}$<br>$\rightarrow x=1 \rightarrow y^3 = 1$<br>$y = 1$<br>$\rightarrow x=1 \rightarrow y^3 = 1$<br>$y = 1$<br>$\rightarrow x=1 \rightarrow y^3 = 1$<br>$y = 1$ | ب) $x=0 \rightarrow y^3 = 2x^2 = 0$<br>$y = 0$<br>تابع نیست              | ج) $\sqrt{x-4} =  y+2  = 0$<br>$x-4=0 \rightarrow x=4$<br>$y+2=0 \rightarrow y=-2$<br>$\rightarrow x=4, y=-2$<br>تابع نیست | ۱ |
| الف) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$                                                                                                                                                                                              | ب) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$ | ج) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$                                                   | ۲ |
| الف) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$                                                                                                                                                                                              | ب) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$ | ج) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$                                                   | ۳ |
| الف) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$                                                                                                                                                                                              | ب) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$ | ج) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$                                                   | ۴ |
| الف) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$                                                                                                                                                                                              | ب) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$ | ج) $\frac{1}{x-4} - \frac{1}{x+4} = 0$<br>$D_{\text{ممنوع}} = \{-4, 4\}$                                                   | ۵ |

|                                                                                                                                                                            |                                                                                                                                                                                     |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <p>الف) <math display="block">y = \frac{(x-2)(x-3)(x-4)}{x^2}</math></p> <p><math>\hookrightarrow x=2 \hookrightarrow x=3 \hookrightarrow x=4</math></p>                   | <p>ب) <math display="block">y = \frac{(x-2)(x-3)^2(x-4)}{x^2}</math></p> <p><math>\hookrightarrow x=2 \hookrightarrow x=3 \hookrightarrow x=4</math></p>                            | <p>٦</p>  |
| <p>الف) <math display="block">y = \frac{(x-2)(x-3)}{(x-4)^2}</math></p> <p><math>\hookrightarrow x=2 \hookrightarrow x=3 \hookrightarrow x=4</math></p>                    | <p>ب) <math display="block">y = \frac{(x-2)(x-3)}{(x-4)^2}</math></p> <p><math>\hookrightarrow x=2 \hookrightarrow x=3 \hookrightarrow x=4</math></p>                               | <p>٧</p>  |
| <p>الف) <math display="block">y = \frac{(x-1)^2(x-2)}{(x-3)^2}</math></p> <p><math>\hookrightarrow x=1 \hookrightarrow x=2 \hookrightarrow x=3</math></p>                  | <p>ب) <math display="block">y = \frac{(x-1)(x-2)}{(x-1)(x-3)}</math></p> <p><math>\hookrightarrow x=1 \hookrightarrow x=2 \hookrightarrow x=3</math></p>                            | <p>٨</p>  |
| <p>٩</p>                                                                                                                                                                   |                                                                                                                                                                                     |           |
| <p>الف) <math display="block">y = \sqrt{\frac{x^3-1}{x^3-x}}</math></p> <p><math>x^3-1=0 \Rightarrow x=1</math></p> <p><math>x^3-x=0 \Rightarrow x=0, x=1, x=-1</math></p> | <p>ب) <math display="block">y = \sqrt{\frac{(x-4)(x-5)}{(x-1)(x-6)}}</math></p> <p><math>\hookrightarrow x=4 \hookrightarrow x=5 \hookrightarrow x=1 \hookrightarrow x=6</math></p> | <p>١٠</p> |