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دارد تعریف

$y = \sqrt{\frac{-m}{f(m)}}$

$f(m) \geq 0$

$m \in [-5, 0] \cup [2, 5]$

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دارد تعریف

$y = \sqrt{\frac{-m}{f(m)}}$

$f(m) \geq 0$

$m \in (-3, 0) \cup (0, 2)$

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ابتدا $f(1) = 1 - 4 + 4 = 1$

$f(-1) = 1 - 4 + 4 = 1$

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$f(1) = 1 - 4 + 4 = 1$

$f(-1) = 1 - 4 + 4 = 1$

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$f(m) = am^2 - bm + 2$

$f(m-1) = a(m-1)^2 - b(m-1) + 2$

$a + b - 2am = 2m + 2$

$a + b = 2$

$a - b = -1$

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$\frac{n^2 + 4n + 4}{n^2 + 6n + 9} \rightarrow \frac{(n+2)^2 + 1}{(n+2)^2 + 3}$ $\lim_{n \rightarrow \infty} f(\sqrt{n}-1) \rightarrow \frac{(\sqrt{n})^2 + 1}{(\sqrt{n})^2 + 3} = \frac{1}{1} = \frac{1}{1}$	2
$n^2 + \frac{1}{n^2} + 2 - 2 = \left(n - \frac{1}{n}\right)^2 + 2 \Rightarrow (-2)^2 + 2 = 11$ $f(-2) \text{ then } (n - \frac{1}{n}) = \frac{n^2 + 1}{n^2}$	2
$g(m) = \sqrt{9 - m^2} \geq 0, f(m) = \{(2, 0)(1, -1)(0, 2)(-1, 1)\}$ $\text{الف } \frac{f}{g} = D_f \cap D_g - \{m \mid g(m) = 0\} = \{1, 0, 2\} - \{0\} \Rightarrow \{1, 2\} \Rightarrow \{(1, \frac{3}{2})(2, \frac{1}{2})(0, \frac{3}{2})\}$ $\text{ب } \frac{g}{f} = D_f \cap D_g - \{m \mid f(m) = 0\} = \{0, 1, 2\} - \{2\} \Rightarrow \{0, 1\} \Rightarrow \{(0, \frac{3}{2})(1, \frac{1}{2})\}$	2
$\text{الف } f(m) = \{(2, 2)(3, 1)(-2, 1)(1, -1)\} \quad f(m) = \{(2, 1)(3, 1)(-2, 2)(1, -2)\}$ $\text{ب } f(m) + 1 = \{(2, 2)(3, 1)(-2, 1)(1, -1)\}$ $\text{ج } f^2(m) + 1 = \{(2, 4)(3, 1)(-2, 1)(1, 1)\}$ $\text{د } f(2m) = \{(2, \frac{1}{2})(3, 2)(-2, 1)(1, -1)\}$ $f(m) = \{(1, 1)(\frac{1}{2}, 2)(-\frac{1}{2}, 2)(\frac{1}{2}, -2)\}$	10
$g(m) = \{(1, 0)(2, 1)(-1, 1)(-2, -1)(3, -1)\}$ $f(m) = \{(2, 2)(3, 1)(-2, 1)(1, -1)(2, 1)\}$ $\text{الف } f - g = \{(2, 2)(1, 1)(3, 2)(-2, 1)\}$ $\text{ب } \frac{f}{g} = \{(2, 2)(1, 1)(3, 2)(-2, 1)\}$	10