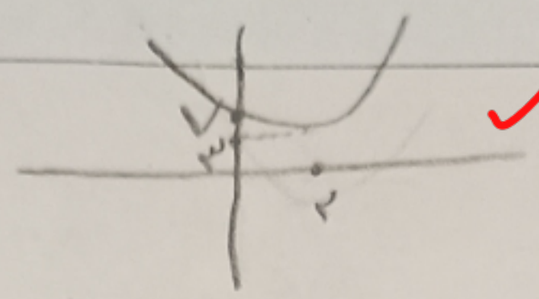
19,5

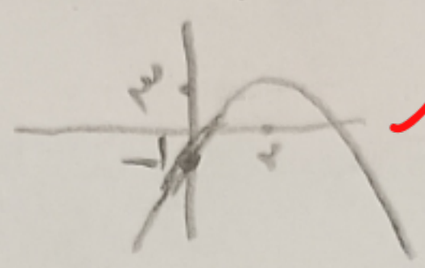
نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ..... کلاس .....

۱ (۲)

الف) $y=x^2-4x+7$



ب) $y=-x^2+4x-1$



۲ (۲)

۳ (۲)

۴ (۲)

۵ (۲)

۶ (۲)

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

$\Rightarrow -4x^2+12x+5 \longrightarrow \frac{-\Delta}{4a} = \frac{-289}{-24} = \frac{289}{24}$ ✓

۷ (۲)

$2S = 5P + 7$

$S = \frac{m+2}{m}$, $P = \frac{-2}{m}$

$\frac{2m+4}{m} = \frac{-10}{m} + 7$

$\frac{2m+4}{m} = \frac{-10+7m}{m}$

$2m+4 = -10+7m$

$(… = 4m \to m = 4)$ ✓

$\frac{4+2}{4} = \frac{6}{4} = \frac{3}{2}$, $\frac{-2}{4} = -\frac{1}{2}$

$x_1^2 + x_2^2 = (x_1+x_2)^2 - 2x_1 x_2 = (\frac{3}{2})^2 - 2\times -\frac{1}{2} = \frac{9}{4} + 1 = \frac{13}{4}$ ✓

۸ (۲)

$\alpha+\beta = 5$, $\alpha\beta = 2 \to \beta = \frac{2}{\alpha} \to \beta^2 = \frac{4}{\alpha^2}$

$\frac{4\alpha+\beta^5}{5\beta^2} = \frac{1}{5}\beta^3 + \frac{4\alpha}{5\beta^2} \Rightarrow \frac{1}{5}\beta^3 + \frac{1}{5}\alpha^3 = \frac{1}{5}(\beta^3+\alpha^3)$

$\Rightarrow \frac{1}{5}((\alpha+\beta)^3 - 3\alpha\beta(\alpha+\beta)) = \frac{95}{5} = 19$ ✓

۹ (۲)

$(c=4)$

$ax^2+bx+4 = 3x+10 \xrightarrow{x=2} 4a+2b+4 = 16$

$\xrightarrow{x=-3} 9a-3b+4 = 1$

$a = 1$, $b = 3$ ✓

$\Rightarrow x^2+3x+4 \Rightarrow$ رأس $= \frac{-b}{2a} = \frac{-3}{2}$ ✓

۱۰ (۱/۷۵)

$y = x$, $y = 2x^2+(m+1)x+m+4 \Rightarrow 2x^2+(m+1)x+m+4 = x$

$2x^2+mx+m+4 = 0 \xrightarrow{\text{تماس}} \Delta = 0$

$\to m^2 - 4\times 2(m+4) = m^2 - 8m - 48 = (m-12)(m+4)$

$m = 12$ ✗ ناحیه سوم

$m = -4$ ✓