



اشتراک الماس

شامل چه محصولاتیه؟

کلاس سالیانه دروس اختصاصی
(تدریس و حل تست پیشرفته) ۴ کلاس



کلاس های تست طلایی
دروس اختصاصی ۴ کلاس



کلاس آمادگی امتحان نهایی
دروس اختصاصی و عمومی ۱۰ کلاس



آزمون های دوپینگ



آزمون سالیانه ۲۳ مرحله



کارگاه های کمر بند مشکی



همایش های موضوعی و
جمع بندی



فقط یکبار هزینه تا روز کنکور به هیچ کلاس و آزمون ریگه ای نیاز نداری

احمد احمدى
٠٩١٨٤١٠٧٢٢٩

121 → ③

$$T=5 \quad f'(-1) = \frac{3}{2}$$

$$g(u) = f(u+1) + f(3u+1)$$

$$g'(-2) \quad g'(u) = f'(u+1) + 3f'(3u+1)$$

$$g'(2) = f'(-1) + 3f'(4) = 4f'(-1) = 4 \times \frac{3}{2} = 6$$

احمد احمدى

121 → (3)

$$T=5 \quad f'(-1) = \frac{3}{2}$$

$$g(u) = f(u+1) + f(3u+1)$$

$$g'(-2) \quad g'(u) = f'(u+1) + 3f'(3u+1)$$

$$g'(2) = f'(-1) + 3f'(4) = 4f'(-1) = 4 \times \frac{3}{2} = 6$$

احمد احمدى

127 → Q

$$f(x) = (x-4)\sqrt[3]{x+3}$$

$$f'(x) = \sqrt[3]{x+3} + (x-4) \times \frac{1}{\sqrt[3]{(x+3)^2}}$$

$$f(0) = 2$$

$$f'(5) = 2 + \frac{1}{12} = \frac{25}{12}$$

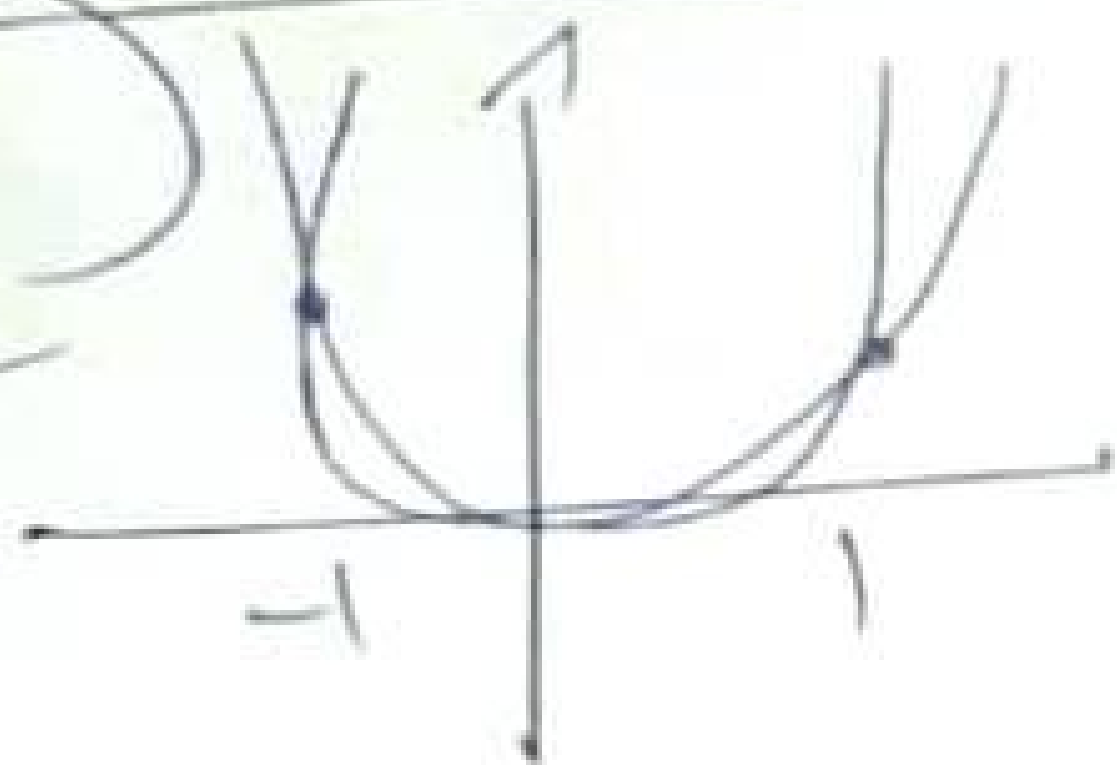
$$\text{جواب : } \frac{-2f'(5)f(5) + 3f'(5)}{5} = \frac{-2 \times 2 \times \frac{25}{12} + 3 \times \frac{25}{12}}{5}$$

$$= \frac{-100 + 75}{12 \times 5} = \frac{-25}{12 \times 5} = \boxed{-\frac{5}{12}}$$

114

$$\frac{-n-1}{(1+\sqrt[n]{n})(n)} \quad \text{HOP} \quad \frac{-1}{2} \quad \frac{2}{\sqrt[n]{n}e} \quad \left(2 - \frac{3}{2}\right)$$

116



$$f(x) = \begin{cases} -1 & \cdot (x < 1) \\ \pm 1, 0 & \\ 1 & - (x < 0) \end{cases}$$

نقطة می باشد

117

$$n=1 \rightarrow p(-3) \rightarrow a=2$$

$$p(x) = (x+3)(x+1) \quad \text{for } a+b$$

$$\begin{aligned} p(x) &= a+b \\ p(-3) &= 3a+b \end{aligned} \quad \left\{ \begin{array}{l} R_1 \\ R_2 \end{array} \right.$$

119

$$b = a+2$$

$$\lim_{b \rightarrow 1} \frac{a+b+2}{b+b} = \frac{b+1}{b+1} = 1$$

احمد احمدی

130

(1.9)

$$\begin{vmatrix} 1 & \\ & 4 \end{vmatrix} A \begin{vmatrix} \alpha & \\ & \alpha-2 \end{vmatrix} \begin{vmatrix} -1 & \\ & 2 \end{vmatrix}$$

$$A_1 = \sqrt{29}$$

$$A_2 = 5 \quad -2\alpha + \alpha = 2$$

احمد احمدى

$$\alpha^2 + 3\alpha - 10 = 0 \Rightarrow (\alpha - 2)(\alpha + 5) = 0$$

$$\alpha = 2, -5 \quad A, b = 5 \text{ (??)}$$

(11.) $f \circ f^{-1}$

$$f \circ f^{-1}(x) = f^{-1}(x) = \frac{2}{2\sqrt{3}} = \frac{1}{\sqrt{3}}$$

(111)

$$5^{n-1} \cdot \left(1 - \frac{1}{5}\right) = n$$

$$1 + \frac{1}{5} = n$$

$$\frac{1}{5} = \frac{1}{n-1}$$

$$f(n) = 2 + \frac{1}{n} \left(1 + \frac{1}{n-1}\right)$$

$$f(n) = \frac{2n-1}{n-1} \quad (3)$$

(112)

$$\sin(A+B) = \sin A \cos B + \cos A \sin B$$

$$\cos A \sin B = \sin A \cos B - (\sin A \cos B)$$

$$\sin(A-B) = \sin A \cos B - \cos A \sin B$$

$$\left(\frac{\sqrt{2}}{2}\right)$$



(1.1)

C/E w q>1

a=1

q=2

a=1

q=3

a=2

q=2

a=3

q=2

4 < 5 ✓

1.2

$$\frac{-b}{4a} = 2 \rightarrow 20m^2 - 12m^2 - 144 = 0$$

m=3 ✓

$$\frac{-b}{2a} = \frac{12}{6} = 2 \rightarrow m=2 ✓$$

1.3

$$n(C) = n(A) + 2$$

$$n(B) = n(A) - 3$$

$$n(B) \cdot n(C) = \frac{1}{4} n(A) n(B) + n(A) n(B)$$
$$\frac{3}{2} n(A) n(B)$$

$$n(B) = 18, n(D) = 15, n(A) = 8$$

$$n(B) - n(A) = 10$$

4

احمد احمدى

1.4 $A \cup B \rightarrow \dots \rightarrow V$
 $A \cup B \rightarrow (A \cup B^c) \cap U$ (1.4.1)

1.5 $\rightarrow$ (4)

1.7 $\frac{1}{a^3+1} + \frac{1}{a^3+1} = a^6 + a^3 + 1$
 $\left(\frac{2(a^3+1)}{(a^3+1)^2 - a^3} \right)^{1/6} = \left(\frac{2(a^3+1)}{2(a^3+1)} \right)^{1/6} = 1$
 (3) 3

1.8 $f(x) = \begin{cases} x^3 & x > 0 \\ -x^3 & x \leq 0 \end{cases}$ $y = x^3$
 $f^{-1}(x) = \sqrt[3]{x}$

1.9 $\rightarrow$ (2) ✓

احمد احمدی

$$121 \rightarrow (3)$$

$$T=5 \quad f'(-1) = \frac{3}{2}$$

$$g(u) = f(u+1) + f(3u+1)$$

$$g'(2) \quad g'(u) = f'(u+1) + 3f'(3u+1)$$

$$g'(2) = f'(-1) + 3f'(4) = 4f'(-1) = 4 \times \frac{3}{2} = 6$$

$$122 \rightarrow (1)$$

$$f(u) = (u-4)\sqrt{u+3}$$

$$f'(u) = \sqrt{u+3} + (u-4) \times \frac{1}{2\sqrt{u+3}}$$

$$f(0) = 2 \quad f'(5) = 2 + \frac{1}{2} = \frac{25}{12}$$

$$\text{جواب: } \frac{-2f'(5)f(5) + 3f'(5)}{5} = \frac{-2 \times 2 \times \frac{25}{12} + 3 \times \frac{25}{12}}{5}$$

$$= \frac{-100 + 75}{12 \times 5} = \frac{-25}{12 \times 5} = \frac{-5}{12}$$

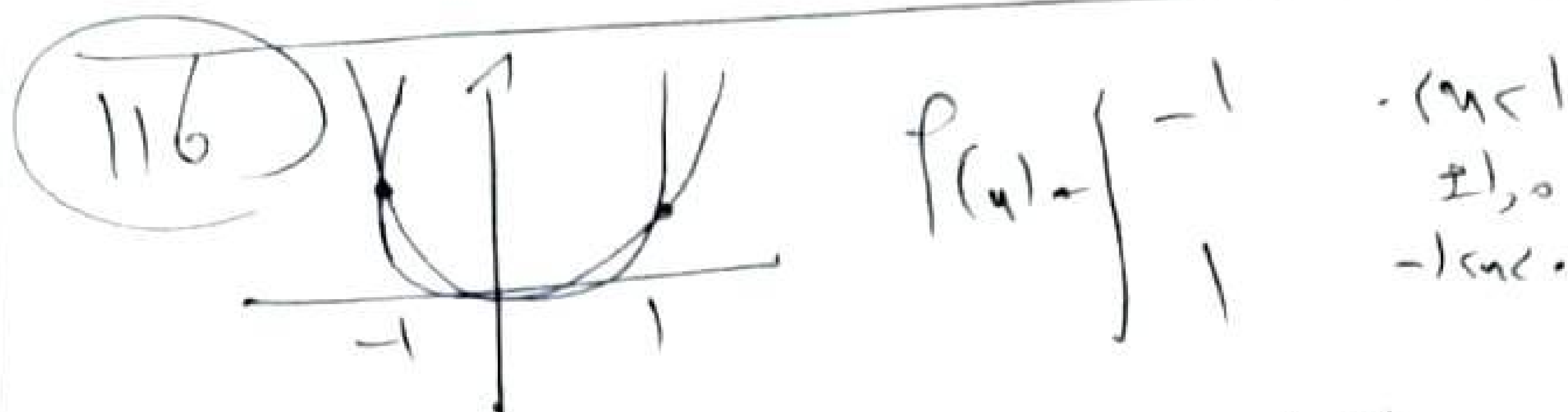
$$\frac{-b}{2a} = \frac{12}{2m} = 2 \rightarrow 12 = 6m \rightarrow m = 2$$

$$2m^2 - 12m + 11$$

$$m = \frac{-b}{2a} = \frac{12}{2} = 3 \quad \checkmark$$

احمد احمدى

$$\frac{114}{-n-1} \text{ WOP } \frac{-1}{2} \quad \frac{2}{\sqrt[3]{n^2}} \quad \left(-\frac{3}{2} \right)$$



نقطہ پر بیٹگی ہو

117

$n=1 \rightarrow p(-3)=0 \rightarrow a=2$

$p(x) = (x+3)(x+1) \quad \text{for } a \neq b$

$\begin{cases} p(x) = a + b \\ p(-3) = 3a + b \end{cases} \quad R = ?$

119

$b = a + 2$

$\lim_{b \rightarrow 1} \frac{a + b + 2}{b + b} = \frac{b + 1}{b + 1} = 1$

احمد احمدی

1, 130

(1.9)

$$\begin{vmatrix} 1 & \alpha \\ \alpha & 2 \end{vmatrix} = 0 \Rightarrow 1 \cdot 2 - \alpha^2 = 0 \Rightarrow \alpha^2 = 2 \Rightarrow \alpha = \pm \sqrt{2}$$

Ab. 129

$$A_1 = 5 \quad -2\alpha + \alpha = 2$$

$$\alpha^2 + 3\alpha - 10 = 0 \Rightarrow (\alpha - 2)(\alpha + 5) = 0$$

$$\alpha = 2, -5 \quad A_1 = 6, -3 \quad (??)$$

(11.) $f = f^{-1}$

$$f \circ f(x) = f(f(x)) = \frac{2}{2\sqrt{x}} = \frac{1}{\sqrt{x}}$$

(111)

$$5^{n-1} \cdot \frac{1}{5} = n \quad 1 + \frac{1}{5} = n$$

$$\frac{1}{5} = \frac{1}{n-1}$$

$$f(n) = 2 + \frac{1}{n} \left(1 + \frac{1}{n-1}\right) \quad f(n) = \frac{2n-1}{n-1} \quad (3)$$

(112)

$$\int \cos(x) = \sin(A+B)$$

$$\cos(A-B) = \cos A \cos B + \sin A \sin B$$

$$\sin(A-B) = \sin A \cos B - \cos A \sin B \quad \left(\frac{\sqrt{2}}{2}\right) \checkmark$$

احمد احمدى

(1.1)

$C \in W \quad q > 1$

$a_1 = 1$
 $q_1 = 2$

$a_1 = 1$
 $q_1 = 3$

$a_1 = 2$
 $q_1 = 2$

$a_1 = 1$
 $q_1 = 2$

$A \in \mathbb{R}$ ✓

(1.2)

$$\frac{-b}{4a} = 2 \rightarrow 2 = \frac{-12n^2 - 144n}{4a}$$

$n = 3$ ✓

$$\frac{-b}{2a} = \frac{12}{6} = 2 \rightarrow n = 2$$

(1.2)

$$n(C) = n(A) + 2$$

$$n(B) = n(D) - 3$$

$$n(B) \cdot n(C) = \frac{1}{2} (n(B) \cdot n(D) + n(A) \cdot n(D))$$

$$\frac{3}{2} n(B) \cdot n(D)$$

$$n(B) = 13, n(D) = 15$$

$$n(A) = 8$$

$$n(B) = n(A) = 1$$

(4)

احمد احمدى

1.4 $A \cdot B \rightarrow \{ \langle a, b \rangle : a \in A, b \in B \}$
 $A \cdot B \rightarrow \{ \langle a, b \rangle : a \in A, b \in B \} \subseteq U$ (1.4.1)

1.5 $\rightarrow$ 4

1.7 $\frac{1}{a^2+1} + \frac{1}{a^2+1} = \frac{2}{a^2+1}$
 $\left(\frac{2(a^2+1)}{(a^2+1)^2 - a^2} \right)^{1/2} = \left(\frac{2(a^2+1)}{2(a^2+1)} \right)^{1/2} = 1$ (1.7.1)

1.8 $f(x) = \begin{cases} x^2 & x \geq 0 \\ -x^2 & x < 0 \end{cases}$ $y_1 = x^2$
 $f(x) = \begin{cases} x^2 & x \geq 0 \\ -x^2 & x < 0 \end{cases}$ $y_2 = -x^2$

1.9 $\rightarrow$ 2 ✓

احمد احمدی