

$$\frac{x^2 + 3x^2 + 2x}{a(a+1)(x+2)(x-2)} - \frac{2}{x(x-2)} = \frac{x(x+3x+2)}{a(x+1)(x+2)(x-2)} - \frac{2}{x(x-2)} \quad \dots 1.1$$

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

کامل مرتبوی

1.2

$$S_{\Delta} = \frac{2}{x} a^2 - \frac{1}{x} \rightarrow \frac{2}{x} a^2 - \frac{1}{x} = 1 \delta a \rightarrow \frac{2}{x} a^2 = 1 \delta a - \frac{1}{x} = 0$$

$$\Delta = b^2 - 4ac \Rightarrow a = 1 \checkmark$$

$$a = -\frac{1}{2} \text{ و } c = \frac{1}{2} \rightarrow S_{\Delta} = \delta x \Delta = \epsilon$$

$(x+2)(x-2)$ و ϵ

$$\frac{2a-1}{x+2} - \frac{a-2}{x-2} = \frac{2}{x} \rightarrow x(x-1)(x-2) - (x-2)(x+2)x = \dots 1.3$$

$$2x^2 - \epsilon \Rightarrow 2x^2 - 12x + 2\epsilon = 2x^2 - \epsilon \rightarrow x^2 - 12x + 2\epsilon = 0 \Rightarrow$$

$$(x-1\epsilon)(x+2) = 0 \rightarrow \begin{cases} x = 1\epsilon \\ x = -2 \end{cases} \rightarrow x_1 + x_2 = 12$$

1.4

$$\frac{f \circ g}{f - g} = \frac{f(x_1)(x_2)(x_3)}{f(x_1)(x_2)(x_3)} = \left\{ (2, 2) (2, -2) (1, \frac{2}{2}) \right\}$$

$$R = \left\{ 2, -2, \frac{2}{2} \right\}$$

$$f(x) = x^2 - 2x - 2$$

$$g(x) = \frac{|x|}{x}$$

$$x > 0 \rightarrow x^2 - 2x - 2 = -1 \left\{ \begin{matrix} x = 2 \\ x = -1 \end{matrix} \right.$$

$$x < 0 \rightarrow x^2 - 2x - 2 = -1 \left\{ \begin{matrix} x = \frac{1+\sqrt{5}}{2} \\ x = \frac{1-\sqrt{5}}{2} \end{matrix} \right.$$

$$x = 2 \rightarrow \frac{2-2\sqrt{2}}{2}$$

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$$f\left(-\frac{r}{2}\right) = \left[r\left(-\frac{r}{2}\right) - 1\right] = [-r] = -r \Rightarrow -r+1 = -r \quad -1.4$$

$$f\left(\frac{\sqrt{2}}{2}\right) = \left[r\left(\frac{\sqrt{2}}{2}\right) - 1\right] = [\sqrt{2} - 1] = [1, 1] = 1$$

$$(ca^r + \epsilon b)^r = (a^r)^r + r(a^r)^{r-1}(\epsilon b) + \dots + r a^{\epsilon} (\epsilon b)^{r-1} + (\epsilon b)^r \quad -1.5$$

$$r a^{\epsilon} b$$

kazem-mortazavi

$$y_1 = \frac{1}{r} x^r + a x + b$$

$$y_2 = 13 - x$$

$$\rightarrow \frac{1}{r} x^r + a x + b = 13 - x$$

$$\begin{cases} x=2 \rightarrow -2 + 2a + b = 1 & -1.6 \\ y=1 \rightarrow -1 + 1a + b = 0 \end{cases}$$

$$\begin{cases} 2a + b = 13 \\ 1a + b = 1 \end{cases}$$

$$y = \frac{1}{r} x^r + (a + \dots) \Rightarrow x_3 = \frac{-b}{ra} = \frac{-\epsilon}{-1} = r$$

$$4a = 12 \rightarrow a = 3$$

$$b = 1$$

$$y_3 = 13$$

$$\text{کافه} = \frac{ra \cdot 13}{ra \cdot 1} = 13$$

$$m = \frac{24-2}{1-1} = 2 \Rightarrow y = 2x + b \rightarrow \begin{cases} x=1 \rightarrow y=2 \rightarrow 2 = 2(1) + b \Rightarrow b = 0 \\ y=2 \rightarrow 2 = 2 \end{cases}$$

$$y = 2x - 1 \rightarrow x=9: y = 2(9) - 1 = 17$$

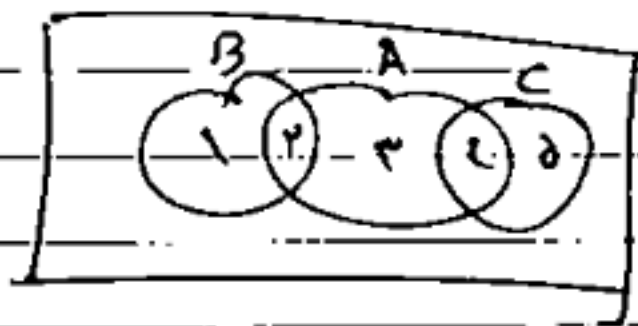
(17)

$$B = \frac{50}{100} \times 340 = 170 \quad \text{--- (11)}$$

$$(P \leftrightarrow Q) \wedge P \Rightarrow \sim P$$

{	$(T \leftrightarrow F) \wedge T \Rightarrow T$	درست	--- (12)
	$(F \leftrightarrow T) \wedge T \Rightarrow F$	درست	
	$(F \leftrightarrow F) \wedge F \Rightarrow T$	درست	
	$(T \leftrightarrow T) \wedge T \Rightarrow T$	درست	

$$(A - C) \cup (A \cap B) = A$$



$A = \{1, 2, 3, 4\} \quad A - C = \{1, 2\}$

$B = \{1, 2, 5\} \quad A - B = \{3, 4\}$

$C = \{3, 4, 6\} \quad (A - C) \cup (A - B) = \{1, 2, 3, 4\}$

$$\frac{100}{100} \times \frac{1}{100} \times \frac{1}{100} \times \frac{1}{100} \times \frac{1}{100} = \frac{1}{10000}$$

$$P(A) = \frac{\binom{5}{1} \times \binom{4}{1}}{\binom{9}{2}} = \frac{1 \times 4}{9 \times 1 \times 4} = \frac{1}{9}$$

کا علم برتھووس

(12)

$$12, 13, \boxed{14, 15, 16, 17, 18, 19}, 20 \quad \underline{114}$$

\downarrow
 $Q_1 \quad Q_2 \quad Q_3$

$$Q_1 = 12, 13, \quad Q_2 = 14, 15, \quad Q_3 = 16, 17, 18, 19 \quad \chi = 19$$

$$Q = \sqrt{\frac{(110)^2 + 1^2 + (010)^2 + 1^2 + 2^2}{3}} = \sqrt{114} = 10.67$$

سوال مرتبہ

$$9, 10, \boxed{11, 12, 13, 14, 15, 16, 17, 18}, 19 \quad = 117$$

\downarrow
 $Q_1 \quad Q_2$

$$Q_1 = 11, 12, \quad Q_2 = 13, 14, 15, 16, 17, 18 \Rightarrow R = 17 - 11, 12, 13, 14$$

$$S_9 = \frac{9}{2} [2a_1 + 7d] = 90 \Rightarrow 9a_1 + 34d = 90 \Rightarrow a_1 + 3.77d = 10$$

$$Q_2 = a_1 + 7d = 17 \Rightarrow \begin{cases} a_1 + 3.77d = 10 \\ a_1 + 7d = 17 \end{cases}$$

$$3.77d = 7 \Rightarrow d = \frac{7}{3.77}$$

$$S_n = \frac{a_1(1 - r^n)}{1 - r} \Rightarrow S_n = \frac{48(1 - (\frac{1}{2})^n)}{1 - \frac{1}{2}} = 96(1 - \frac{1}{2048}) = 119$$

$$128 - \frac{128}{2048} = 128 - \frac{1}{16} = 127 \frac{15}{16}$$

(12)

$$\alpha_2 = \frac{2}{3}, \alpha_3 = \frac{4}{5}, \alpha_4 = \frac{10}{11}, \alpha_5 = \frac{22}{11} \quad \underline{12.}$$

با نشر

کافه مرتقوی

۹۹، ۵، ۳۰

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