بنام خدا

SUBJECT: ریاضی معماریان یازدهم A تکلیف ۳۰۱ — **۱۹,۵**

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(۱) (۲)

$$= \frac{(x-1)(4x-3)}{(x-1)(5x-3)} = \frac{1}{2}$$ ✓

(۲) (۲)

$$\frac{-3x+1-3x-1}{x} = \frac{-6x}{x} = -6$$ ✓

(۳) (۲)

$$\frac{(\sqrt{x}-2)(\sqrt{x}+2)}{\sqrt{x}-2} = 4$$ ✓

(۴) (۲)

$$\times\frac{\text{مزدوج}}{\text{مزدوج}} = \frac{x^2-2x}{4(x-2)(3x+2)} = \frac{2}{28} = \frac{1}{14}$$ ✓

$x(x-2)$

(۵) (۱,۵)

$$\times\frac{\text{مزدوج}}{\text{مزدوج}} = \frac{4(1-\sqrt{x})}{4-5+x} = \frac{(4)(1-\sqrt{x})}{(1+\sqrt{x})(1-\sqrt{x})} = -\frac{4}{2} = -2$$

$(x-1)(1+\sqrt{x})$, $\sqrt{x}+1$, -1

(۶) (۲)

$$\times\frac{\text{مزدوج}}{\text{مزدوج}} \times \frac{\text{مزدوج}}{\text{مزدوج}} = \frac{3x-12}{5x-20} \times \frac{27}{8} = \frac{81}{40}$$ ✓

$3(x-4)$, $5(x-4)$

(۷) (۲)

$$\times\frac{\text{مزدوج}}{\text{مزدوج}} \times \frac{\text{مزدوج}}{\text{مزدوج}} = \frac{3x+\sqrt{x}-4}{x-1} \times \frac{3}{4} = \frac{(\sqrt{x}-1)(3\sqrt{x}+4)}{(\sqrt{x}-1)(\sqrt{x}+1)} \times \frac{3}{4} = \frac{21}{8}$$ ✓

(۸) (۲)

$$= \frac{(1+\cos x)(\cos^2 x - \cos x + 1)}{1-\cos^2 x} \quad \frac{}{(1-\cos x)(1+\cos x)} = \frac{3}{2}$$ ✓

$\xrightarrow{\text{H.op}} \lim_{x \to 1} \dfrac{\frac{-1}{2\sqrt{x}}}{-\frac{-1}{2\sqrt{2-x}}} = -2$

-2

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$= \dfrac{1 - \frac{\sin x}{\cos x}}{\frac{\sin x - \cos x}{1}} = \dfrac{\frac{\cos x - \sin x}{\cos x}}{\frac{-(\cos x - \sin x)}{1}} = -\dfrac{1}{\cos x} = -\sqrt{2}$ ✓

(2) (9)

$= \dfrac{\frac{\sin^2 x}{\cos^2 x} - 1}{\frac{\cos^2 x - \sin^2 x}{1}} = \dfrac{\frac{\sin^2 x - \cos^2 x}{\cos^2 x}}{\frac{-(\sin^2 x - \cos^2 x)}{1}} = -\dfrac{1}{\cos^2 x} = -2$ ✓

(2) (10)