علی جمالی . یازدهم تجربی ۸

۱- کسر های داده شده حد $\frac{0}{0}$ هستند پس به رفع ابهام آن ها می پردازیم .

$\frac{0}{0}$ → hop

$\lim_{x\to 1} \frac{8x-7}{10x-2} = \frac{1}{2}$

۲- $= \lim_{x\to 0} \frac{-(3x-1)-(3x+1)}{x} = \lim_{x\to 0} \frac{-6x}{x} = -6$

۳- $\frac{0}{0}$ $= \sqrt{x}+2 = 4$

۴- $\lim_{x\to 2} \frac{(\sqrt{2x}-\sqrt{2})(\sqrt{2x})}{(2x+2)(x-2)} = \frac{\sqrt{2x}}{(\sqrt{2x}+\sqrt{2})(2x+2)} = \frac{\sqrt{2}}{(2\sqrt{2})(4)} = \frac{1}{8}$

۵- $\frac{(1-x)(2+\sqrt{5-x})}{(x-1)(1+\sqrt{x})} = -\frac{6}{2} = -3$

۶- $\frac{2x^3+3x-14}{3x^2+7x-20} \div \frac{27}{8} = \frac{2x^3-16x}{3x^2-20x} \times \frac{8}{27} = \frac{2x}{3x} \times \frac{8}{27} = \frac{16}{81}$

۷- $\frac{\sqrt{3x+4}-4}{x-1} \times \frac{3}{6} = \frac{3x-12}{(x-1)(\sqrt{3x+4}+4)} \times \frac{3}{6} = \frac{3}{\sqrt{3x+4}+4} \times \frac{3}{6} = \frac{3}{8} \times \frac{3}{6} = \frac{3}{16}$

$\frac{0}{0}$ hop → $\frac{(1+\cos)(1-\cos+\cos^2)}{-(1+\cos)(1-\cos)} = \frac{1-(-1)+1}{1-(-1)} = \frac{3}{2}$

۹- $\frac{1-\frac{\sin^2}{\cos}}{\sin-\cos} = \frac{\frac{\cos-\sin}{\cos}}{\sin-\cos} = \frac{-1}{\cos} = \frac{-1}{\frac{\sqrt{2}}{2}} = -\sqrt{2}$

۱۰- $\frac{\frac{\sin^2-\cos^2}{\cos^2}}{\cos^2-\sin^2} = \frac{-1}{\cos^2} = \frac{-1}{\frac{1}{2}} = -2$