

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۱۱... کلاس پایه نهم

$$\left. \begin{aligned} 1 + \frac{(c^2)^2}{9} + \frac{(5! \cdot 7! + \dots + 25!)}{9} &= 7 \\ 2 + \frac{(5 \cdot c^2 \cdot 7^2)}{9} + 7! + 11! + \dots + 27! &= 4 \end{aligned} \right\} \text{در } 2 \text{ ضرب شود} \quad (2)$$

$$\begin{aligned} \text{الف)} \quad \sqrt[4]{(4+\sqrt{5})^{-1}} \sqrt{1+\sqrt{5}} &= \sqrt[4]{(4+\sqrt{5})^{-1}} \times (1+\sqrt{5})^{\frac{1}{2}} = \sqrt[4]{1+\sqrt{5}} \\ &= \left(\frac{\sqrt{2}+\sqrt{5}}{\sqrt{5}+2} \right) (\sqrt{3-\sqrt{5}} - \sqrt{4+\sqrt{5}}) = \end{aligned}$$

$$\begin{aligned} \text{ب)} \quad \frac{\sqrt{11}+\sqrt{17}}{5-\sqrt{4}} - 2(\sqrt{9}-1)^{-1} &= \frac{19(\sqrt{17}+\sqrt{2})}{25-4} - \frac{2\sqrt{3+2}}{\sqrt{10}-1} = \sqrt{17}\sqrt{2} - \sqrt{10} - 1 \\ &= \sqrt{17} - 1 \end{aligned}$$

$$\text{ج)} \quad \frac{\sqrt{10}-1}{4+\sqrt{2}} + (2-\sqrt{2})^{-1} = \frac{4+\sqrt{2}+4\sqrt{2}-9-2+\sqrt{2}}{18-4\sqrt{2}+2\sqrt{2}-2} = \frac{1+8\sqrt{2}}{16-2\sqrt{2}}$$

$$\begin{aligned} \text{د)} \quad \frac{\sqrt{1+\sqrt{2}} + \sqrt{\sqrt{2}-1}}{\sqrt{\sqrt{2}-\sqrt{2}}} - 2 &= \frac{\sqrt{2}(\sqrt{\sqrt{2}+2})}{\sqrt{\sqrt{2}-\sqrt{2}}} - 2 = \sqrt{2} \sqrt{11+2\sqrt{4}} - 2 \\ &= \sqrt{22+4\sqrt{4}} - 2 \end{aligned}$$

$$\text{ه)} \quad \sqrt[4]{\frac{1}{2^4}}, \sqrt[4]{\frac{1}{4^4}}, \sqrt[4]{\frac{1}{8^4}} = \sqrt[4]{\frac{1}{2^4}} \times \sqrt[4]{\frac{1}{4^4}} \times \sqrt[4]{\frac{1}{8^4}} = \frac{1}{2} \times \frac{1}{4} \times \frac{1}{8} = \frac{1}{512}$$

$$\frac{10^2 + 10^2 \times 10^2 + 10^2 \times 10^2 + \dots + 10^2 \times 10^2}{10^2 \times 10^2 + 10^2 \times 10^2 + \dots + 10^2 \times 10^2} = 52 \Rightarrow \frac{10^2(1+10+10^2+\dots+10^{10})}{10^2(\frac{1}{5} + \frac{1}{5} + 1 + 10 + 10^2 + \dots + 10^{10})} = 52$$

$$\left(\frac{10}{5}\right)^n = \frac{52 \times 10^{11} \times 5}{10^{11}} \Rightarrow \left(\frac{10}{5}\right)^n = \frac{5}{5} \Rightarrow n = 2$$

$$((a+b)^r - (a-b)^r)^r = (a^r + b^r + r a^r b^r - r a^r b^r)^r = (a^r + b^r)^r$$

$$= (\sqrt{4} - r + \sqrt{4} + r - r(\sqrt{4-r})(\sqrt{4+r}))^r = (r\sqrt{4} - r\sqrt{4})^r = t(r\sqrt{4})$$

$$r^r + 1 - 1\sqrt{12} = r^r + t\sqrt{r}$$

$$r^r - 14\sqrt{4} = r^r - t\sqrt{4} \Rightarrow t = 14$$

$$\left(a + \frac{1}{a}\right)^r - r = \left(a^r + \frac{1}{a^r} + r - r\right) = \left(a^r + \frac{1}{a^r}\right)^r = a^r + \frac{1}{a^r} + r$$

$$v - r\sqrt{c} + \frac{1}{v - r\sqrt{c}} + r = r^r \Rightarrow v - r\sqrt{c} + v + r\sqrt{c} + r = r^r \Rightarrow 14 = r^r$$

$$\Rightarrow t = r$$

$$\frac{10\sqrt{10}}{\sqrt{10}} \cdot \frac{r\sqrt{r}}{\sqrt{r}} = \frac{10\sqrt{10}}{\sqrt{10}} \cdot \frac{r\sqrt{r}}{\sqrt{r}} = \frac{10\sqrt{c}}{\sqrt{c}} = r^r = r = A$$

$$(r+r)^{-\frac{1}{r}} = \left(\frac{1}{rc}\right)^{-\frac{1}{r}} = \frac{1}{r}$$

$$a^{\frac{10}{10}} = r^r \sqrt{a} \Rightarrow \sqrt{a^{10}} = r^r \sqrt{a} \Rightarrow \sqrt{a^{10}} \cdot \sqrt{a} = r^r \sqrt{a} \Rightarrow a^r = r^r$$

$$\frac{\frac{1}{\sqrt{r}} - r}{1 + \sqrt{r}} = \frac{\frac{1 - c\sqrt{r}}{\sqrt{r}}}{1 + \sqrt{r}} = \frac{1 - c\sqrt{r}}{\sqrt{r} + 1}$$

$$\frac{(\sqrt{y+a} + \sqrt{y-f}) \cdot (\sqrt{y+a} - \sqrt{y-f})}{\sqrt{y+a} - \sqrt{y-f}} = \frac{y+a - y-f}{\sqrt{y+a} - \sqrt{y-f}} = \frac{a-f}{r}$$

$$\frac{a-f}{r} - r = \frac{a-f-r}{r} = \frac{a-1}{r}$$