

نام و نام خانوادگی کلاس شماره ۲۱ تکلیف شماره ۲۱ پاس‌نامه تشریحی
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$(1! + 2! \times 4! + \dots + 24!)$ $(\cancel{1!} + \cancel{2!} \times 4! \times \dots \times 24!)$ $= 4 \times 24! = 4 \times 24!$
 $1 + 4 + 0 + \dots$ $\frac{1 \times 2 + 4 + 0 + \dots}{2}$

$$(1 + \sqrt{2})^{-1} (1 + \sqrt{2})^4 = \frac{1}{1 + \sqrt{2}} \times 1 + 4\sqrt{2} + 6 = \frac{1 + 4\sqrt{2} + 6 + 4\sqrt{2} + 2}{1 + \sqrt{2}} = \frac{7 + 8\sqrt{2}}{1 + \sqrt{2}}$$

$$\frac{3\sqrt{2}-1}{2+\sqrt{2}} + \frac{1}{2-\sqrt{2}} = \frac{9\sqrt{2}-2-9+\sqrt{2}}{8+2\sqrt{2}-4\sqrt{2}-2} = \frac{10\sqrt{2}-11}{4-2\sqrt{2}} \quad (ج)$$

$$r^{\frac{1}{2}} \sqrt{r^{\frac{1}{2}}} \times r^{\frac{1}{2}} \sqrt{r^{\frac{1}{2}}} \times r^{\frac{1}{2}} \sqrt{r^{\frac{1}{2}}} = r^{\frac{1}{2}} \times r^{\frac{1}{2}} \times r^{\frac{1}{2}} \times r^{\frac{1}{2}} = r^2$$

$$\left(\sqrt[3]{\sqrt{9-r}} - \sqrt[3]{\sqrt{4+r}} \right)^3 \left(\sqrt[3]{\sqrt{4-r}} + \sqrt[3]{\sqrt{4+r}} \right)^3 = t(1-\sqrt{r})$$

$$\left(\left(\sqrt[3]{\sqrt{4-r}} \right)^3 - \left(\sqrt[3]{\sqrt{4+r}} \right)^3 \right)^3 = \sqrt{4-r} + \sqrt{4+r} - 1(4-r)$$

$$r\sqrt{4-r} - r$$

$$\sqrt[3]{\sqrt{4-r}} \times \sqrt[3]{\sqrt{4+r}} = (4-r)$$

$$\left(\underbrace{a + \frac{1}{a}}_a + \underbrace{\sqrt{r}}_b \right)^3 \left(\underbrace{a + \frac{1}{a}}_a - \underbrace{\sqrt{r}}_b \right)^3 = r^t$$

$$a^{\frac{3}{2}}$$

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

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

$$r = r^t \Rightarrow t = 1$$

$$\left(\frac{1}{r} \right)^{-\frac{r}{r}} = \sqrt[r]{r^r} = r \sqrt[r]{r} \quad \sqrt[r]{14} = r \sqrt[r]{r}$$

$$\sqrt[r]{r^r} \times r \sqrt[r]{r} \times r \sqrt[r]{r} = r^{\frac{r}{r}} \times r^{\frac{1}{r}} \times r^{\frac{r}{r}} = \text{---} r^{\frac{1+1+4}{10}} = r^{\frac{6}{5}}$$

$$\sqrt[r]{r^{\frac{6}{5}}} = r^{\frac{6}{5r}}$$

$$\left(r^{\frac{18}{10}} \right)^{\frac{1}{r}} = \frac{11}{10}$$

$$\left(r^{\frac{1}{10} \cdot \frac{1}{r}} \right)^{\frac{1}{r}} \quad \left(r \times \frac{1}{r} \right)$$

$$\sqrt[10]{a} = r \sqrt[10]{a} \times \sqrt[10]{10}$$

$$a^{\frac{1}{10}} = r^{\frac{1}{10}} \times a^{\frac{10}{10}} \times a^{\frac{1}{10} \cdot \frac{1}{r}}$$