

$$g_n^m = a \rightarrow m = n^a \Rightarrow g_{mn}^{m^2n} = b \Rightarrow g_n^{n^{2a+1}} = b$$

$$\Rightarrow b = \frac{2a+1}{a+1} \Rightarrow [b] = \left[1 + \frac{a}{a+1}\right] = \frac{1}{2} \checkmark$$

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$$g = \sqrt{\frac{x}{g_{\frac{1}{x}}}} \begin{cases} x > 0 \\ g_{\frac{1}{x}} > 0 \rightarrow x < 1 \Rightarrow D = (0, 1) \checkmark \end{cases}$$

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$$g = \frac{g_r^{(x^2-x-2)}}{\sqrt{x^2-1}+1} \begin{cases} x^2-x-2 > 0 \rightarrow \frac{-1 \pm 2}{\pm 2 - \pm 1} \text{ I} \\ x^2-1 > 0 \rightarrow (x-1)(x+1) > 0 \rightarrow \frac{-1}{\pm 1 - \pm 1} \text{ II} \Rightarrow I \cap II = (-\infty, -1) \cup (2, +\infty) \checkmark \end{cases}$$

$$2g_9^a + g_a^2 = 2 \Rightarrow 2g_{3^2}^a + g_a^2 = 2 \Rightarrow g_3^a + g_a^2 = 2$$

$$\Rightarrow g_3^a = g_a^2 = 1 \Rightarrow a = 2 \checkmark$$

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$$\left(\frac{g_0^0}{g_0^0}\right) x^2 + \left(\frac{g_0^0}{g_0^0}\right) x - g_0^0 = \left(\frac{g_0^0}{g_0^0} - \frac{g_0^0}{g_0^0} - \frac{g_0^0}{g_0^0}\right) x^2 + \left(\frac{g_0^0}{g_0^0} - \frac{g_0^0}{g_0^0} - \frac{g_0^0}{g_0^0}\right) x - \left(\frac{g_0^0}{g_0^0} - \frac{g_0^0}{g_0^0} - \frac{g_0^0}{g_0^0}\right)$$

$$= \frac{20}{10} x^2 + \frac{1}{1} x - \frac{11}{1} \quad \Delta = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{194}}{10} = \frac{14}{10} \checkmark$$

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$$\begin{cases} g_1^2 = \frac{2}{11} \\ g_2^0 = 2 \end{cases} \quad g_{14}^{10 \cdot \frac{2}{11}} = \frac{g_1^{10}}{g_2^{14}} = \frac{g_1^0 + g_2^2}{g_1^2 + g_2^2} = \frac{2+1}{2 \cdot 11 + 1} = \frac{3}{23} = \frac{10}{19} \checkmark$$

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$$\begin{cases} g_r^r = \frac{1}{r} = \frac{d}{\lambda} \\ g_r^0 = \frac{10}{1} \end{cases}$$

$$g_{10}^r = \frac{g_r^r}{g_r^{10}} = \frac{g_r^r + g_r^r}{g_r^0 + g_r^r} = \frac{1 + \frac{d}{\lambda}}{\frac{10}{1} + 1} \\ = \frac{\frac{1}{\lambda}}{\frac{10}{1} + 1} = \frac{1}{11} = \frac{1}{11} \checkmark$$

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$$g_{\lambda}^q + g_{\lambda}^r = m \rightarrow \frac{r}{f} g_r^r + \frac{1}{f} \cdot m \rightarrow r g_r^r + 1 = r m \rightarrow g_r^r = \frac{r m - 1}{r} \\ \Rightarrow g_{\frac{1}{f}}^r = g_{\frac{1}{f}}^f + g_{\frac{1}{f}}^r = 1 + \frac{1}{r} g_r^r = 1 + \frac{r m - 1}{r} = \frac{r + r m - 1}{r} = \frac{r m + r}{r} \\ = \frac{r}{r} (m + 1) \checkmark$$

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$$\left(\frac{f}{1}\right)^{r n - 1} = \left(\frac{d}{r}\right)^{r n r} \rightarrow \left(\frac{1}{f}\right)^{1 - r n} = \left(\frac{d}{r}\right)^{r n r} \rightarrow r n r + r n - 1 = 0 \\ a + b \rightarrow \begin{cases} n = -1 \\ n = \frac{1}{r} \end{cases} \\ g_{\lambda}^{(9n+1)} \xrightarrow[n = \frac{1}{r}]{n \neq -1} g_{\lambda}^f = g_{\frac{1}{r}}^r = \frac{r}{r} \checkmark$$

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$$g_{\lambda}^b = \frac{r}{f} + \frac{r}{f} g_r^r \rightarrow g_{\lambda}^b = \frac{r}{f} + g_{\lambda}^q \rightarrow g_{\lambda}^{\frac{b}{a}} = \frac{r}{f} \\ \rightarrow \lambda^{\frac{r}{f}} = \frac{b}{a} \rightarrow f = \frac{b}{a} \rightarrow b = r f \\ \Rightarrow g_{(r b - 1)}^r = g_{1 \cdot \lambda - 1}^r = g_{100}^r = \frac{r}{f} \checkmark$$

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$$g_r^f = \frac{f a}{b} \rightarrow r g_r^f = \frac{f a}{b} \Rightarrow \frac{g_r^f}{r} = \frac{a}{b} \quad r a = b + c \Rightarrow r \frac{a}{b} = 1 + \frac{c}{b} \\ \Rightarrow g_{r-1}^f = \frac{c}{b} \quad \begin{cases} \frac{a}{b} = \frac{g_r^f}{r} \\ \frac{c}{b} = g_{r-1}^f - g_1^f \end{cases} \Rightarrow \frac{a}{c} = \frac{g_r^f}{g_{r-1}^f - g_1^f} = g_{\frac{1}{0}}^{\frac{r}{1}} \Rightarrow \frac{c}{a} = g_{\frac{1}{r}}^{\frac{1}{0}} \\ = \left(\frac{1}{\sqrt{r}}\right)^{\frac{c}{a}} = r^{-\frac{c}{a}} = r^{-\frac{1}{\lambda} g_{\frac{1}{r}}^{\frac{r}{1}}} = \left(\frac{1}{0}\right)^{-\frac{1}{\lambda} (g_{\frac{1}{r}}^{\frac{r}{1}})^r} = \left(\frac{1}{0}\right)^{-\frac{1}{f}} = \sqrt[f]{0} \checkmark$$

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