

$$\frac{r^x (1+r+9+2v+11+2fr)}{r^{x-1} (1+r+f+11+14+2r)} = \frac{r^x f \times r^x}{4r \times r^{x-1}} = \frac{2r}{9} \times \frac{r^x}{r^{x-1}} = 2r$$

$$\frac{1}{9} \times \frac{r^x}{r^{x-1}} = 1 \Rightarrow \frac{r^x}{9} = r \Rightarrow \frac{r^x}{r} = r \Rightarrow r^{x-1} = r \Rightarrow x-1=0 \Rightarrow x=1$$

$r \neq r$

$$(a+b)^f (a-b)^f = (a^f - b^f)^f = (\sqrt{9-r} - \sqrt{9+r})^f = (r\sqrt{9-r} - r\sqrt{9+r})^f = r^f r - 18r^f - 9$$

$$= 14(\sqrt{9-r}) = + (r - \sqrt{r}) = + = 14$$

$$a = \sqrt{(r-\sqrt{r})^r} = \sqrt{r-\sqrt{r}} \xrightarrow{x=a+\frac{1}{a}} (x-\sqrt{r})(x+\sqrt{r})^r = (x^r - r)^r \Rightarrow x^r = a^r + \frac{1}{a^r} + r$$

$$r-\sqrt{r} + r + \sqrt{r} + r = 9 \Rightarrow (9-r)^r = 14 \Rightarrow r^+ = 14 \Rightarrow + = \sqrt{r}$$

$$x = r^{\frac{r}{2}} \times r^{\frac{1}{r}} \times r^{\frac{f}{r}} \Rightarrow r^{\frac{r}{r}} = r \Rightarrow (rx)^{\frac{1}{r}} = r^{\frac{r}{r}} = \frac{1}{r}$$

$$a^{\frac{1}{v}} = 2v \times a^{\frac{14}{v}} \Rightarrow a^{\frac{-14}{v}} = 2v \quad \frac{1}{a^r} = 2v \Rightarrow \frac{1}{a} = \sqrt{2v}$$

$$\frac{r\sqrt{r}-r}{1+\sqrt{r}} \times \frac{1-\sqrt{r}}{1-\sqrt{r}} = \frac{1r + 9\sqrt{r}}{-r} = \underline{9-2\sqrt{r}}$$

$$(\sqrt{a+a} - \sqrt{a-e})t = rt = a+f = rt \Rightarrow t = \frac{a+f}{r}$$

$$t-r = \frac{a+f}{r} - r = \frac{a}{r}$$

$$(1! + 3! + 5! + \dots + 25!) (2! + 4! + 6! + \dots + 26!)$$

$$(1 + 9 + 0 + \dots + 0) (2 + 4 + 0 + \dots + 0) = 7 \times 6 = 42$$

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

(2- الف)

$$\frac{\sqrt{2} + \sqrt{5}}{\sqrt{2}(\sqrt{5} + \sqrt{2})} = \frac{1}{\sqrt{2}} \Rightarrow \frac{1}{\sqrt{2}} \times (-\sqrt{2}) = -1$$

(ب)

$$(2-\sqrt{5}) + (2+\sqrt{5}) - 2\sqrt{4} = 4 - 4 = 0 \Rightarrow -\sqrt{2}$$

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

$$(\sqrt{2})^3 - (1)^3 = (\sqrt{2}-1)(2 + \sqrt{2} + 1) = 2\sqrt{2} + 2 - 4 - \sqrt{2} = \sqrt{2} - 1$$

$$\Rightarrow \frac{(2\sqrt{2}-1)(4-\sqrt{2})}{12} = \frac{(2\sqrt{2}-1)2}{12} \Rightarrow \sqrt{2}-1 + \frac{1}{2-\sqrt{2}} = \frac{2\sqrt{2}-4}{2-\sqrt{2}}$$

$$(2-\sqrt{2}+4)(2+\sqrt{2}) = 6\sqrt{2} + 1 - 4\sqrt{2} = 2\sqrt{2} + 1$$

$$x = (\sqrt{1+\sqrt{3}} + \sqrt{\sqrt{3}-1})^2 \Rightarrow 2\sqrt{3} + 2\sqrt{2} = 2(\sqrt{3} + \sqrt{2})$$

(3- الف)

$$= \frac{\sqrt{2(\sqrt{2}+\sqrt{3})}}{\sqrt{\sqrt{3}-\sqrt{2}}} - 2 = \sqrt{2(\sqrt{3}+\sqrt{2})^2 - 2} = \sqrt{4 + 2 - 2} = \sqrt{4}$$

$$2^{\frac{1}{12}} \times 16^{\frac{1}{4}} \times 2^{\frac{1}{2}} \times 2^{\frac{1}{12}} = 2^{\frac{1}{12} + \frac{1}{3} + \frac{1}{2} + \frac{1}{12}} = 2^1 = 2$$

(ب)