

1 - ماحولہ میں پوری

$$f(x) = r^{A+B} = r^r \rightarrow r = 1 \rightarrow r = r$$

$$r^{A+B} = 1 \rightarrow A+B = 0$$

$$r^{2A+B} = 9 \rightarrow 2A+B = 2$$

$$r = r \rightarrow a = 1 \quad b = -1$$

$$r^{a-1} = r^{b-1} = \frac{1}{r}$$

2 - مجموعہ جو - حاصل کرنے

$$r^{a+r} = r + 1 \rightarrow r^{a+r} = r^{r+1}$$

$$r^{r+1} - r^{a+r} + 1 = 0 \rightarrow r^r - 1 + 1 = 0 \rightarrow r^r = 1 \rightarrow r = 1$$

$$r = r \rightarrow r^a = r \rightarrow a = \log_r r = 1$$

$$\log_r r + \log_r r = \log_r 1 \Rightarrow \log_r r = \frac{1}{2}$$

3

$$\log_r r \times \log_r r + \log_r r \times \log_r r = (\log_r r)^2 + \log_r r \times \log_r r$$

$$(\log_r r)^2 + (\log_r r + \log_r r) (\log_r r + \log_r r) \rightarrow (\log_r r)^2 + (r - \log_r r) (r + \log_r r) - (\log_r r)^2 + r - (\log_r r)^2$$

$$\rightarrow \frac{(1 + \log_r r) (r + \log_r r)}{1 - \log_r r}$$

4 - E

$$\log_r (r^n) \text{ اور } \log (r^n - r^n + 1) + r \log (1-n) = \Delta$$

$$(r^n - r^n + 1)(1-n)^r = 10^\Delta \rightarrow \frac{(r^n - r^n + 1)^r}{= (1-n)^r} = 10^\Delta \rightarrow (1-n)^\Delta = 10^\Delta \rightarrow 1-n = 10 \rightarrow \boxed{r = -9}$$

$$\log_r 9 = \frac{1}{2}$$

5 - A

$$\frac{(r-1)(r^n + r^n + 1)}{(r-1)^r} = 1 \rightarrow r^n - r = r \rightarrow \boxed{r = 2} \quad r \log_r r = \frac{1}{2}$$

6 - 4

$$(r-n)(r-n)^r = 10^r \rightarrow (r-n)^r = 10^r \rightarrow \log_r (r-n) - \log_r \frac{1}{(r-n)^r} = r$$

$$r-n = 10 \rightarrow \boxed{r = -1} \quad r \log_r 1 = \frac{1}{2}$$

7 - 5

$$r^r - r = r^n \rightarrow r^r - r^n - r = 0 \quad r = \frac{\epsilon \pm \sqrt{14 + \Delta}}{r}$$

$$\rightarrow \frac{r \pm \sqrt{4}}{1} \quad r = \sqrt{4} \rightarrow \sqrt{r+4} \rightarrow \log_4 (r + \sqrt{4} - r) \rightarrow \frac{1}{2}$$

8 - A

$$\log_r 1 = \frac{\log_r \Delta}{\log_r r} \rightarrow \frac{r \log_r r}{r \log_r r + \log_r r} \rightarrow \frac{1}{r} \rightarrow \frac{\Delta}{r}$$

$$\log_r 1 \text{ اور } \log_r r = \frac{\Delta}{r} \quad \log_r r = \frac{\Delta}{r}$$

$$\log r + \log r$$

$$? \log \frac{9}{11}$$

هو

$$\log \frac{r}{10} = \frac{1}{10} - 9$$

$$\log r + \log r + \log r$$

$$\frac{11}{11}$$

$$\frac{1}{2} = \frac{\log r}{\log r} \leftarrow \log \frac{r}{10} = \frac{14}{10}$$

$$\frac{1}{r} \log \frac{r}{10} = \frac{1}{10}$$

? $\sqrt{r} \left(\frac{b}{a} \right)$ $(a \log r)^n + am + b \log r = 0 - 10$

$$a \log r + b \log r = a \Rightarrow \log r = \frac{a}{a+b} \quad \text{d.g. } \frac{1}{r} = \frac{b+a}{a}$$

$$\text{d.g. } \frac{1}{r} = 1 + \frac{b}{a} \Rightarrow \text{d.g. } \frac{1}{r} = \frac{b}{a} \Rightarrow \sqrt{r} \frac{1}{r} = \sqrt{a}$$