

$$A=0 \leftarrow \frac{A}{B}=0 \quad \text{نتیجه:}$$

$$(15) \frac{\sqrt{x-28}}{3x-2} = 0 \Rightarrow \sqrt{x-28} = 0 \Rightarrow \frac{\sqrt{x-28}}{\sqrt{1}} = \frac{28}{\sqrt{1}}$$

$$\boxed{x=4}$$

نتیجه: اگر حاصل ضرب دو یا چند عبارت برابر صفر باشد، حداقل یکی از آن عبارات

برابر صفر خواهد بود

$$(16) \underbrace{x}_x \underbrace{(x-1)}_{x-1} \underbrace{(x+2)}_{x+2} = 0$$

$$\begin{cases} \boxed{x=0} \\ x-1=0 \Rightarrow \boxed{x=1} \\ x+2=0 \Rightarrow \boxed{x=-2} \end{cases}$$

$$(17) (3x-9)(x+24y)(2z-40) = 0$$

$$\begin{cases} 3x-9=0 \Rightarrow \frac{3x}{3} = \frac{9}{3} \Rightarrow \boxed{x=3} \\ x+24y=0 \Rightarrow \frac{x}{24} = \frac{-x}{24} \Rightarrow y = -\frac{x}{24} \Rightarrow \boxed{y = -\frac{1}{7}} \end{cases}$$

$$2z-40=0 \Rightarrow \frac{2z}{2} = \frac{40}{2} \Rightarrow \boxed{z=20}$$

$$(18) \quad (2x - \omega)(y + v)(kz - r)(rt + v) = 0$$

$$\left\{ \begin{array}{l} 2x - \omega = 0 \Rightarrow \frac{2x}{2} = \frac{\omega}{2} \Rightarrow \boxed{x = \frac{\omega}{2}} \\ y + v = 0 \Rightarrow \boxed{y = -v} \\ kz - r = 0 \Rightarrow \frac{kz}{k} = \frac{r}{k} \Rightarrow \boxed{z = \frac{r}{k}} \\ rt + v = 0 \Rightarrow \frac{rt}{r} = \frac{-v}{r} \Rightarrow \boxed{t = -\frac{v}{r}} \end{array} \right.$$

نتیجه: اگر  $x^2 = k$  باشد،  $x = \pm\sqrt{k}$  زیرا:

$$(+\sqrt{k})^2 = k \quad (-\sqrt{k})^2 = k$$

مثال:  $x^2 = 4 \Leftrightarrow x = \pm 2$  زیرا:

$$(+2)^2 = 4 \quad (-2)^2 = 4$$

$$(\sqrt{13})^2 = 13 \quad (-\sqrt{13})^2 = 13 \quad x = \pm\sqrt{13} \Leftrightarrow x^2 = 13$$

$$(19) \quad \begin{array}{l} x^2 - 1 = 1 \\ x^2 = 1 + 1 \\ x^2 = 4 \\ x = \pm 2 \end{array}$$

$$(20) \quad \left(\frac{r}{p}x - r\right)(x^2 + r)\left(x - \frac{1}{\omega}\right) = 0$$

(11)

$$\frac{r_{n+1}}{f_{n+1}} - \frac{r_{n+1}}{f_{n+1}} = 0$$