

19.5

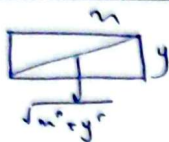
نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۸ کلاس: *پایه دهم*

$$\frac{x}{y} = \frac{a}{r} \quad \frac{x+t}{y} = \frac{1+\sqrt{5}}{r}$$



$$\frac{S'}{S} = \frac{(x+t)y}{xy} = \frac{(x+t)}{y} \times \frac{y}{x} = \frac{1+\sqrt{5}}{r} \times \frac{r}{a} = \frac{r}{a} (1+\sqrt{5})$$

$$= \frac{r}{a} + \frac{r\sqrt{5}}{a}$$



$$\frac{\sqrt{x'^2 + y'^2}}{x'} = \frac{1+\sqrt{5}}{r} \rightarrow \frac{x' + y'}{x'} = \frac{1+\sqrt{5}}{r}$$

$$\rightarrow 1 + \frac{y'}{x'} = \frac{1+\sqrt{5}}{r} \rightarrow \frac{y'}{x'} = \frac{1+\sqrt{5}}{r} - 1 \rightarrow \frac{y'}{x'} = \frac{1+\sqrt{5}}{r} - \frac{r}{r} = \frac{1+\sqrt{5}-r}{r}$$

$$= -\frac{1}{r} + \frac{\sqrt{5}}{r}$$

$$ra + \sqrt{ra^2 \xi a} = r \quad a \leq -r$$

$$a > 0$$

$$\sqrt{ra^2 \xi a} = r - ra \rightarrow ra^2 + \xi a = 9a^2 + \xi - 12a \rightarrow 7a^2 - 14a + \xi = 0 \quad a = \frac{r}{\sqrt{5}} < -r$$

$$a = r \rightarrow 4 + \sqrt{1+1} = 4 + \xi = 10 \quad x$$

$$a = \frac{r}{\sqrt{5}} \rightarrow \frac{r}{\sqrt{5}} + \sqrt{\frac{r}{\sqrt{5}} \cdot \frac{r}{\sqrt{5}}} = r \checkmark \rightarrow a = \frac{r}{\sqrt{5}} \quad \frac{a+1}{a} = \frac{\frac{r}{\sqrt{5}} + 1}{\frac{r}{\sqrt{5}}} = \frac{\frac{r}{\sqrt{5}} + 1}{\frac{r}{\sqrt{5}}} = \left(\frac{r}{\sqrt{5}} + 1 \right) \cdot \frac{\sqrt{5}}{r} = \left(\frac{r}{r} + \frac{\sqrt{5}}{r} \right) = \left(1 + \frac{\sqrt{5}}{r} \right)$$

$$\frac{\sqrt{n+1}}{\sqrt{n-1} + \sqrt{n}} - \frac{\sqrt{n+1}}{\sqrt{n-1} - \sqrt{n}} = \frac{n-1}{\sqrt{n-1}} \rightarrow \sqrt{n+1} \left(\frac{1 - \sqrt{n-1} - \sqrt{n-1} - \sqrt{n}}{1 - (n-1)} \right) = \sqrt{n-1}$$

$$\rightarrow \sqrt{n+1} \left(\frac{-2\sqrt{n-1}}{2-n} \right) = \sqrt{n-1} \xrightarrow{n=1} -2\sqrt{n+1} = 10 - n$$

$$\rightarrow 5n + \xi = x^2 - 2 \cdot n + 1 \rightarrow x^2 - 2 \cdot 5n + 94 = 0 \rightarrow x = \frac{2 \xi \pm \sqrt{4 \xi^2 - 4 \cdot 94}}{2} = 12 \pm 4\sqrt{3}$$

پس ۱۲-۴√۳ و ۱۲+۴√۳ جواب می باشد و تنها ارزش مثبت دارد

$$\sqrt{r-n} = t$$

$$\frac{1}{t+r} - \frac{1}{r-t} = \frac{t^2}{0+t} \rightarrow \frac{r-t-t-r}{r-t^2} = \frac{t}{\delta} \rightarrow -1 = \xi - t^2$$

$$\rightarrow t^2 = 1\xi \rightarrow t = \pm \sqrt{1\xi} \rightarrow \sqrt{r-n} = \sqrt{1\xi} \rightarrow r-n = 1\xi \rightarrow n = -12 \checkmark$$

۱۲-۴√۳ و ۱۲+۴√۳ پس جواب هیچ ریشه مثبتی ندارد

$$n(1-n) = n - n^2 = t \quad n \neq 1, 0$$

$$n^r + (1-n^r) = 1 - r - n + rn^r = 1 - rt$$

$$\frac{1-rt}{t^r} = \frac{14}{9} \rightarrow 14t^r + 14t - 9 = 0 \rightarrow (t + \frac{9}{14})(t - \frac{9}{14}) = 0 \rightarrow t = \frac{9}{14} \quad \frac{9}{14} = \frac{9}{14} \quad (5)$$

$$n^r - n + \frac{9}{14} = 0 \rightarrow n = \frac{1 \pm \sqrt{1 - \frac{9}{7}}}{2} = \frac{1 \pm \sqrt{\frac{4}{7}}}{2}$$

$$n^r - n - \frac{9}{14} = 0 \rightarrow n = \frac{1 \pm \sqrt{1 + \frac{9}{7}}}{2} = \frac{1 \pm \sqrt{\frac{16}{7}}}{2} \quad S = \frac{1 + \sqrt{\frac{16}{7}} + 1 + \sqrt{\frac{16}{7}} + 1 - \frac{9}{14}}{2} = \frac{3}{2} = 1.5 \quad (5)$$

$$\sqrt{n + \sqrt{-n^2 + 9n + 4}} + \sqrt{n^r + \sqrt{-n^2 + 4n - 1}} = n + r$$

$$-n^r(n - \frac{9}{14}) + 4(0 - \frac{9}{14}) = -(n - r)(n - \frac{9}{14})$$

$$-(n - \frac{9}{14})(4 - n^r) = (n - \frac{9}{14})(0 - n)(0 + n) \quad \frac{r}{-b + b} = \frac{9}{14}$$

$$\frac{-0}{+4} = \frac{\frac{9}{14}}{-4 + 0} \quad \text{طبق صيغة كوتانج} \quad n = \frac{9}{14} \rightarrow r + \frac{9}{14} = \frac{9}{14} + r \quad \checkmark \quad \text{نريد} \quad n = \frac{9}{14}$$

$$\frac{-r}{-r-1} = \frac{1}{r} \quad ry + m = 14 \rightarrow y = \frac{-m}{r} + \frac{14}{r}$$

$$\frac{-m}{r} + \frac{14}{r} = r \rightarrow -m + 14 = 9 \rightarrow m = 5 \quad \text{نريد}$$

$$\frac{-m}{r} + \frac{14}{r} = r + 1 \rightarrow -m + 14 = 4r + r \rightarrow 4r = 10 \rightarrow r = \frac{5}{2} \rightarrow m = \frac{15}{2} \quad \checkmark \quad \left| \frac{y}{0} \right|$$

$$\frac{-m}{r} + \frac{14}{r} = -r - 1 \rightarrow m = -5 \quad \checkmark \quad \left| \frac{-5}{\frac{5}{2}} \right| \quad AB: \sqrt{4 + 9} = \sqrt{13} = 2\sqrt{13}$$

$$y = |n - r|$$

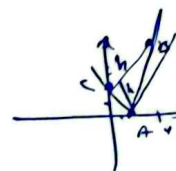
$$y = \frac{1}{r}n + r$$

$$\frac{r}{r-n} = \frac{r}{n-r}$$

$$n - r = \frac{1}{r}n + r \rightarrow \frac{1}{r}n = 2r \rightarrow n = 11 \rightarrow \left| \frac{11}{4} \right|$$

$$r - n = \frac{1}{r}n + r \rightarrow \frac{r}{r}n = 0 \rightarrow n = 0 \rightarrow \left| \frac{0}{r} \right|$$

$$h = \frac{1 + r}{\sqrt{1 + \frac{1}{r}}} = \frac{r + r^2}{\sqrt{r}} = \frac{4\sqrt{5}}{5} \quad BC = \sqrt{4 + 14} = \sqrt{18} = 3\sqrt{2}$$



$$S = \frac{BC \cdot h}{2} = \frac{3\sqrt{2} \cdot 4\sqrt{5}}{2 \times 2} = 12\sqrt{10}$$

$$\text{نريد} \rightarrow n \quad \text{نريد} \rightarrow n + 9$$

$$\frac{1}{n} + \frac{1}{n+9} = \frac{1}{r} \rightarrow (r(n+9) + n) = n^2 + 9n \rightarrow n^r - n^2 - 9n = 0 \rightarrow n(n-1-9) = 0 \rightarrow n = 10$$

$$n = 10, -8 \quad \text{نريد}$$