

الـ) $-1 \leq n-r \leq 1$ $r \leq |n| \leq r$ $r \leq n \leq r$ $r \leq -n \leq r$
 $-r \geq n \geq -r$ $[-r, r] \cup [r, r]$

بـ) $-1 \leq n^2 + r^2 + 1 \leq 1$ $0 \leq n^2 + r^2 \leq r$ ~~$0 \leq n^2 + r^2 \leq r$~~
 $0 \leq (n+1)(n+1) \leq r$

$r - \log_r(n-r)$ ~~$n-r > 0$~~ $n > r$
 $r - \log_r(n-r) \gg 0$ $r > \log_r(n-r)$
 $(r < r)$ $r > n-r$
 $r > n$
 $n^2 - n > 0$ $n(n-1) > 0$ $n(n-1)(n+1) > 0$
 ~~$[-1, 0] \cup [1, \infty)$~~

الـ) $|r^n| \neq 0$ $r^n \neq -1$ ~~$\{R\}$~~
 بـ) $|r^n| \neq 0$ $r^n \neq 1$ $n \neq 0$ ~~$D = \{0\}$~~
 جـ) $r^n - r \neq 0$ $r^n \neq r$ $r^n = r^1$ $r^n = 1$ $n = 1$ ~~$D = \{1\}$~~
 دـ) $r^n - r \neq 0$ $r^n \neq r$ ~~$D = \{1\}$~~

الـ) $r^{n+1} \in W$ $k \in W$ $\{n | n = \frac{k-1}{r}, k \in W\}$

بـ) $\frac{r^n - r}{r^n - r} \in W$ $r^n W - rV = r^n - r$!

$r \sin n - 1 \gg 0$ $r \sin n \geq 1$ $\sin x \gg \frac{1}{r}$ ~~$\left[\frac{\pi}{r} + k\pi, \frac{\pi}{r} + k\pi \right]$~~
 ~~$\{R\}$~~
 $(n-1) > 0$ $\cos n \gg 1$ $-1 < \cos \leq 1$ $\cos x = 1$ $r \neq n$ $k \in \mathbb{Z}$

نام و نام خانوادگی: رتبه: پاسخنامه تشریحی تکلیف شماره: کلاس: چهارم

الف) $\frac{x^2 - 6x}{x^3 - x} = \frac{x(x-6)}{x(x^2-1)} = \frac{x(x-6)}{x(x+1)(x-1)}$

ب) $\frac{x^2(x-1)}{x(x^2-1)} = \frac{x^2(x-1)(x+1)}{x(x-1)(x+1)} = \frac{x^2(x+1)}{x(x+1)} = x$

الف) $x + |x| \geq 0$ $x + |x| \neq 0$ $x \neq -|x|$ $(0, +\infty)$

ب) $x|x| > 0$ $(0, +\infty)$

الف) $y - [x] \geq 0$ $y \geq [x]$ $(-\infty, y)$

ب) $y - [x] > 0$ $y > [x]$ $(-\infty, y)$

الف) $[x - \frac{1}{p}] + [x + \frac{1}{p}] \geq 0$ $[x + \frac{1}{p}] + [x + \frac{1}{p}] \geq 0$

ب) $[x + \frac{1}{p}] - 1 + [x + \frac{1}{p}] \geq 0$ $2[x + \frac{1}{p}] - 1 \geq 0$ $2[x + \frac{1}{p}] \geq 1$ $[x + \frac{1}{p}] \geq \frac{1}{2}$ $x + \frac{1}{p} \geq \frac{1}{2}$ $x \geq \frac{1}{2} - \frac{1}{p}$ $(\frac{1}{2} - \frac{1}{p}, +\infty)$

الف) $\sin x \neq 1$ $R - \{2k\pi + \frac{\pi}{2}\}$

ب) $\sin^2 x \neq 1$ $\sin x \neq \pm 1$ $\sin x \neq \pm \frac{1}{\sqrt{2}}$ $\sin x \neq \pm \frac{\sqrt{2}}{2}$ $R - \{k\pi - \frac{\pi}{4}, k\pi + \frac{\pi}{4}\}$