[State the domain and range for all sketches]

1. Sketch graphs (on separate number planes) for the following functions:

(a) $y = \frac{1}{x}$

(b) $y = \frac{1}{x+2}$

(c) $y = 1 + \frac{1}{x+2}$

2. Sketch graphs (on separate number planes) for the following functions:

(a) $y = \frac{3}{x}$

(b) $y = \frac{3}{x-3}$

(c) $y = -\frac{3}{x-3}$

(d) $y = 4 - \frac{3}{x-3}$

3. Sketch, stating the domain and range :

(a) $y = \frac{2}{x-4} + 1$

(b) $y = -2 - \frac{1}{x+1}$

(c) $y = \frac{1}{2x-3} - 3$

(d) $y = \dfrac{x+2}{x+1}$

(e) $y = \dfrac{x}{x+1}$

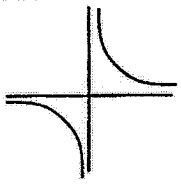
(f) $y = \dfrac{2x+1}{x-2}$

(g) $y = \dfrac{3x-2}{x+3}$

(h) $y = \dfrac{1-x}{1+x}$

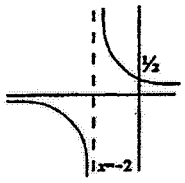
ANSWERS:

1. (a)



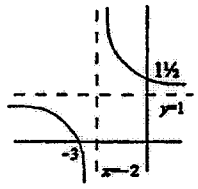
D: $x \neq 0$
R: $y \neq 0$

(b)



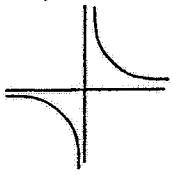
D: $x \neq -2$
R: $y \neq 0$

(c)



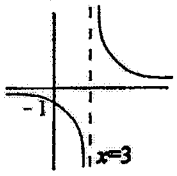
D: $x \neq -2$
R: $y \neq 1$

2. (a)



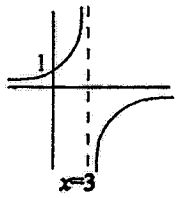
D: $x \neq 0$
R: $y \neq 0$

(b)



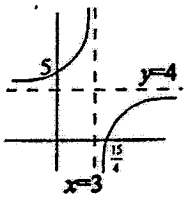
D: $x \neq 3$
R: $y \neq 0$

(c)



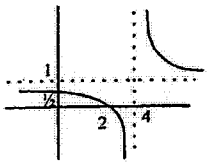
D: $x \neq 3$
R: $y \neq 0$

(d)



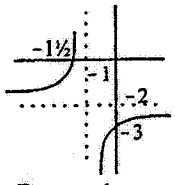
D: $x \neq 3$
R: $y \neq 4$

3. (a)



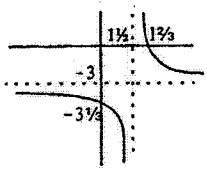
D: $x \neq 4$
R: $y \neq 1$

(b)



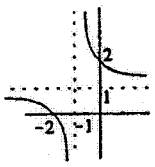
D: $x \neq -1$
R: $y \neq -2$

(c)



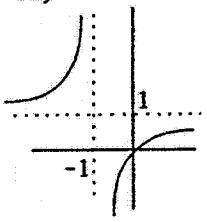
D: $x \neq 1½$
R: $y \neq -3$

(d)



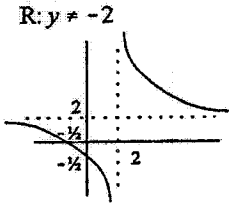
D: $x \neq -1$
R: $y \neq 1$

(e)



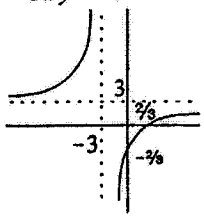
D: $x \neq -1$
R: $y \neq 1$

(f)



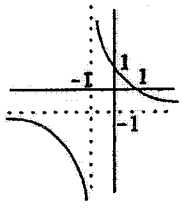
D: $x \neq 2$
R: $y \neq 2$

(g)



D: $x \neq -3$
R: $y \neq 3$

(h)



D: $x \neq -1$
R: $y \neq -1$