

[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 :

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

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

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

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

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

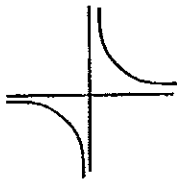
$$(f) \ y = \frac{2x+1}{x-2}$$

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

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

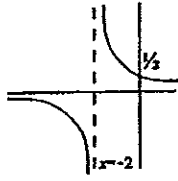
ANSWERS:

1. (a)



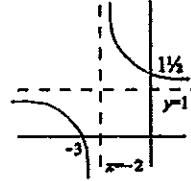
D: $x \neq 0$
R: $y \neq 0$

(b)



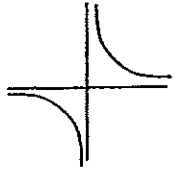
D: $x \neq -2$
R: $y \neq 1/2$

(c)



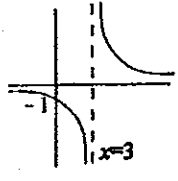
D: $x \neq -2$
R: $y \neq 1$

2. (a)



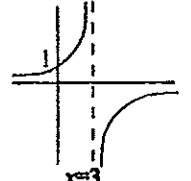
D: $x \neq 0$
R: $y \neq 0$

(b)



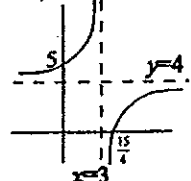
D: $x \neq 3$
R: $y \neq 0$

(c)



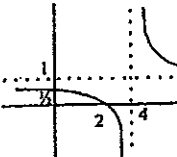
D: $x \neq 3$
R: $y \neq 0$

(d)



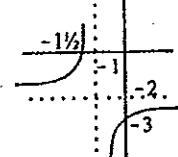
D: $x \neq 3$
R: $y \neq 4$

3. (a)



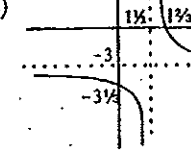
D: $x \neq 4$
R: $y \neq 1$

(b)



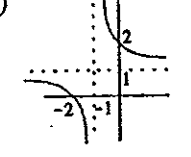
D: $x \neq -1$
R: $y \neq -2$

(c)



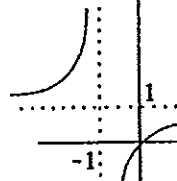
D: $x \neq 1/2$
R: $y \neq -3$

(d)



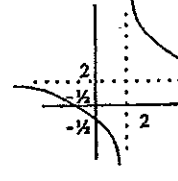
D: $x \neq -1$
R: $y \neq 1$

(e)



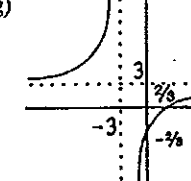
D: $x \neq -1$
R: $y \neq 1$

(f)



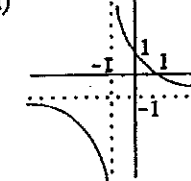
D: $x \neq 2$
R: $y \neq 2$

(g)



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

(h)



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