King Fahd University of Petroleum and Minerals

Prep-Year Math Program

Math 001 - Term 141

Recitation (3.5)

Answered by S. Omar

Question 1: Find all asymptotes of $F(x)=\dfrac{-1}{x-2}+1$

Answer: Equation of vertical asymptotes is: $x=2$

Equation of horizontal asymptotes is: $y=1$

Question 2: If $y = 2$ is a horizontal asymptote for the graph of

$$F(x)=\frac{Ax+2}{3x-A}$$

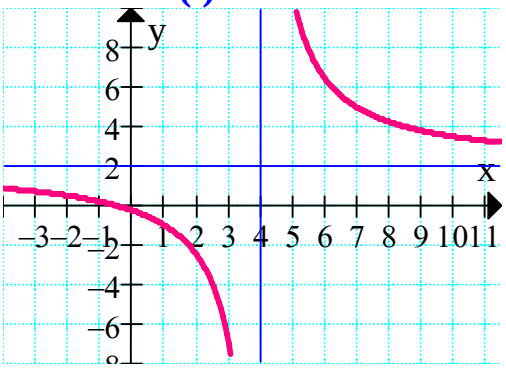
a) Find the value of A. **Answer:** $\boxed{A=6}$

b) Find the vertical asymptote. **Answer:** $\boxed{x=2}$

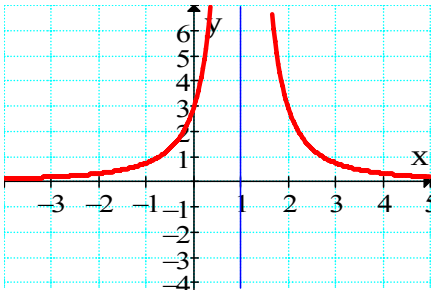
Question 3: Sketch the graph of the following functions

(i): $F(x)=\dfrac{2x+1}{x-4}$ **(ii):** $F(x)=\dfrac{3}{x^2-2x+1}$

Answer: (i):



(ii):



Question 4: Which one of the following functions has the graph given below?

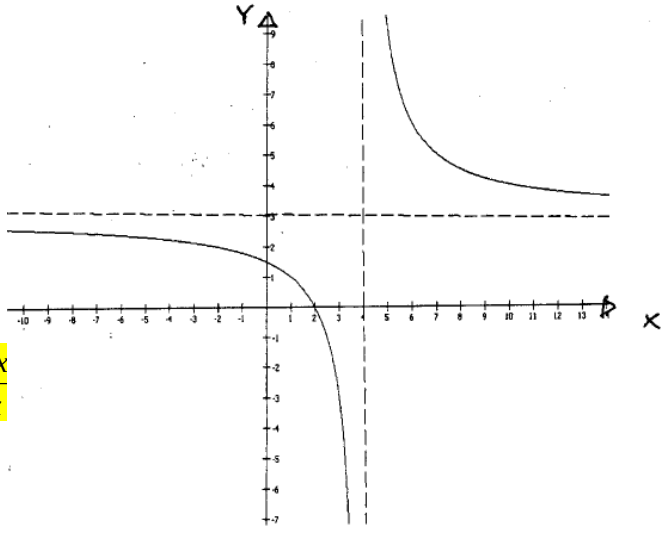
a) $f(x)=\dfrac{2-x}{3-x}$

b) $f(x)=\dfrac{2-3x}{4-x}$

c) $f(x)=\dfrac{x-2}{4-x}$

d) $f(x)=\dfrac{6-3x}{4-x}$

e) $f(x)=\dfrac{3x-12}{4x-16}$



Answer: d) $f(x)=\dfrac{6-3x}{4-x}$