

Unit: 4B

Test Review

1. Solve the rational equation

$$\frac{x+6}{x^2-4x+3} - \frac{x+4}{x^2-4x+3} = \frac{5}{x-3}$$

$$x = \frac{7}{5}$$

2. Solve the rational equation

$$\frac{6}{n} = \frac{6}{n+2} + \frac{2n+10}{n^2+2n}$$

$$n = 1$$

3. Kent can paint a certain room in 6 hours, but Kendra needs 4 hours to paint same room. How long does it take then to paint the room if they work together.?

2.4 hrs

4. Marco can build a lap top twice as fast as Cliff. Working together, it takes them 5 hours How long would it have taken Marco working alone?

7.5 hrs Marco

15 hrs Cliff

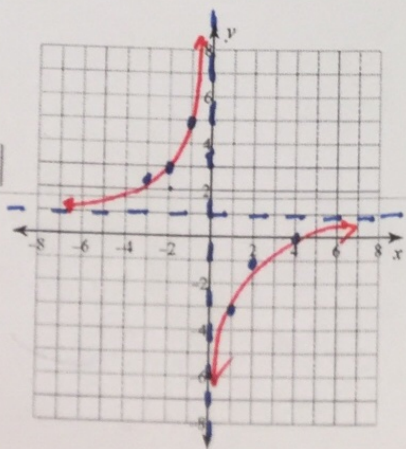
5. Write a rational function of the form $h(x) = \frac{f(x)}{g(x)}$ that has the given vertical asymptote(s) and zero(s): zero of $x = 1$; undefined at $x = 3$

$$f(x) = \frac{(x-1)(x-3)}{(x-3)}$$

6. Write a rational function of the form $h(x) = \frac{f(x)}{g(x)}$ that has the given vertical asymptote(s) and zero(s): vertical asymptotes at $x = 1$ and $x = -2$; zero at $x = 3$

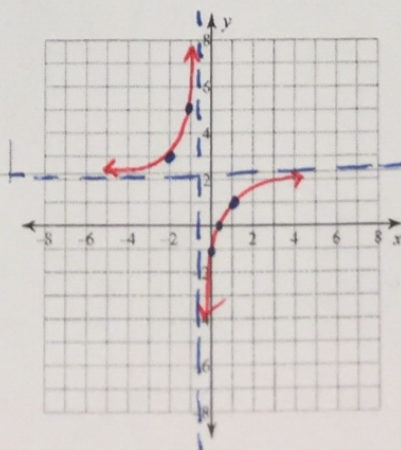
$$f(x) = \frac{(x-3)}{(x-1)(x+2)}$$

7. Sketch the graph of the given rational function on a coordinate plane. Include asymptotes and zeros, if any. $f(x) = \frac{x-4}{x}$



VA: $x=0$
 HA: $y=1$
 XI: $(4,0)$
 YI: None

8. Sketch the graph of the given rational function on a coordinate plane. Include asymptotes and zeros, if any. $f(x) = \frac{4x-1}{2x+1}$



VA: $x = -\frac{1}{2}$
 HA: $y = 2$
 XI: $(\frac{1}{4}, 0)$
 YI: $(0, -1)$