11.3 Solving Rational Equations

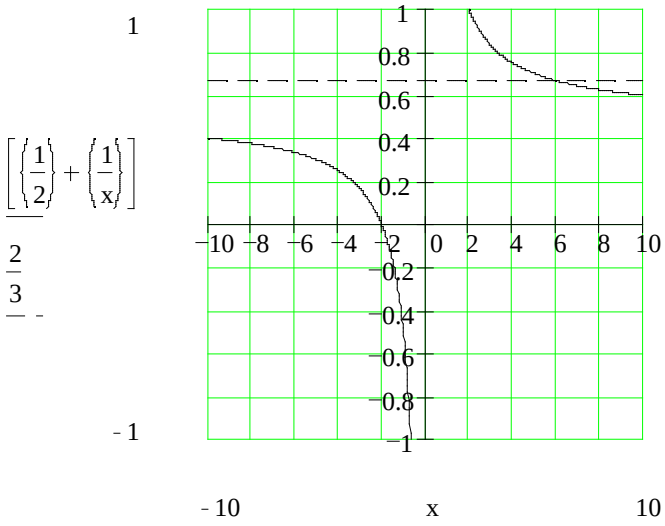
1) $x = 125$

3)

a) One friendly WINDOW: -9.4≤X≤9.4, -1≤Y≤1

b) $Y_1 = \frac{1}{2} + \frac{1}{x}$; $Y_2 = \frac{2}{3}$

c)



5)

a) The speed of the canoe in still water is 3 miles per hour.

b) It takes 20 hrs for the canoe to return upstream.

7) $x = 20$

9) $x = 90$ or $x = -\frac{10}{9}$

11) $x = 3$

a) Verifying the solution causes division by zero, which is undefined.

b) The graph implies that the solution is not valid.

c) The solution is not valid.

13) It takes 4 minutes for the bathtub to fill with the drain closed.

15) The speed of the plane in still air is $175\frac{\text{mi}}{\text{hr}}$.

17) Horizontal asymptote: $y = 1$ Vertical asymptote: $x = 0$

19) Width = 52.5 meters Length = 105 meters.