35. $s(x) = \dfrac{4 - 3x}{x + 7}$ → $-3 + \dfrac{25}{x+7}$

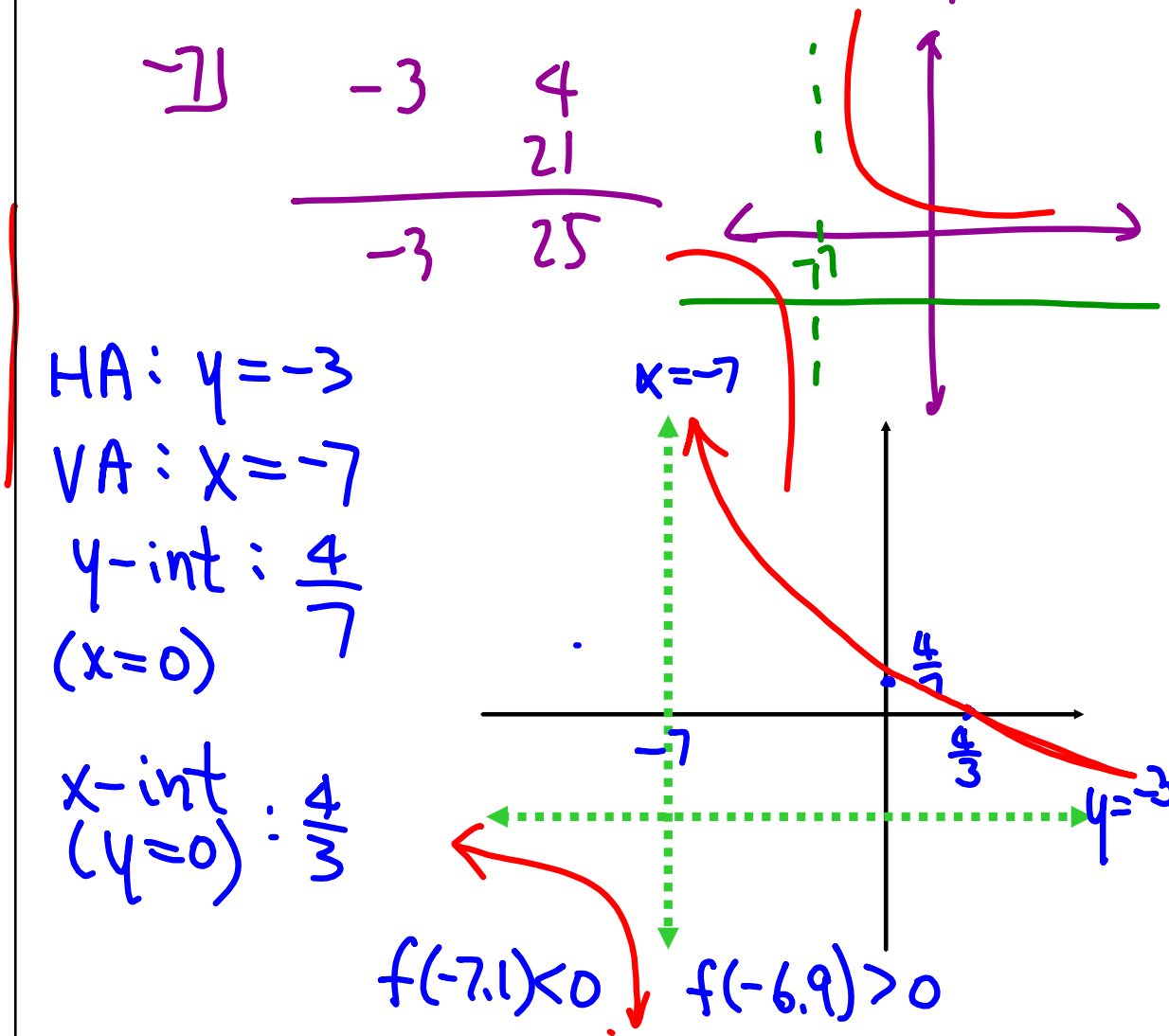
-7 | -3 | 4 / 21 / -3 | 25

HA: $y = -3$

VA: $x = -7$

y-int: $\frac{4}{7}$ $(x=0)$

x-int $(y=0)$: $\frac{4}{3}$



$f(-7.1) < 0$ $f(-6.9) > 0$

$\dfrac{4-3x}{x+7} = -3 = -3 + \dfrac{25}{x+7}$

$0 \neq \dfrac{25}{x+7}$

41. $s(x) = \dfrac{6}{x^2 - 5x - 6}$ + 0

$= 0 + \dfrac{6}{(x-6)(x+1)}$

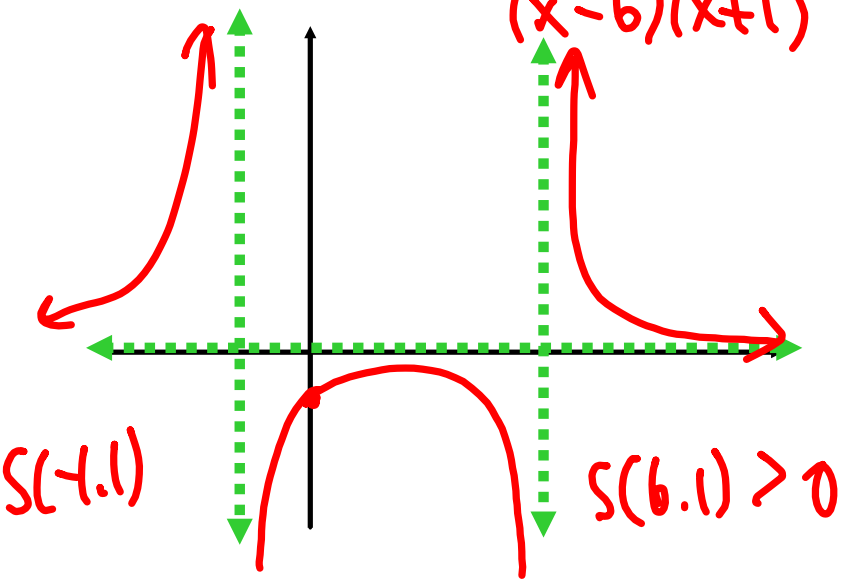
HA: $y = 0$

VA: $x = 6$

$x = -1$

y-int: -1

x-int: none



$0 \neq \dfrac{6}{x^2 - 5x - 6}$

63. $r(x) = \dfrac{x^3 + x^2}{x^2 - 4}$

$$
\begin{array}{r|cccc}
2 & 1 & 1 & 0 & 0 \\
 & & 2 & 6 & 12 \\
\hline
-2 & 1 & 3 & 6 & \boxed{12} \\
 & & -2 & -2 & \\
\hline
 & 1 & 1 & \boxed{4} &
\end{array}
$$

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