Quiz 2

Solve the inequality

\[
\frac{3x - 5}{x - 5} > 4
\]

Solution. The inequality is equivalent to

\[
\frac{3x - 5 - 4(x - 5)}{x - 5} > 0,
\]

which is equivalent to

\[
\frac{-x + 15}{x - 5} > 0.
\]

Thus there are two critical numbers and three test intervals, \((-\infty, 5), (5, 15), (15, \infty)\). Check these to see that just the middle one works. Thus the set we seek is \(5 < x < 15\).