

Simplify

$$\frac{w^2 - 7w - 8}{3w^2 - 3}$$

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$$\begin{array}{r} -8 \\ \times 1 \\ \hline -8 \\ -7 \\ \hline \end{array}$$

$$\frac{(w-8)(w+1)}{3(w^2-1)} = \frac{(w-8)\cancel{(w+1)}}{3\cancel{(w+1)}(w-1)} = \boxed{\frac{w-8}{3(w-1)}}$$

$(w)^2 - (1)^2$

Simplify

$$\frac{9 - 4k^2}{2k^2 + k - 3}$$

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$$-1(4k^2 - 9) = -1(2k-3)(2k+3)$$

$(2k)^2 - (3)^2$

$$3 \overset{-6}{\times} -2$$

$$\frac{-1(2k-3)\cancel{(2k+3)}}{\cancel{(2k+3)}(k-1)}$$

$$\frac{2k^2 + 3k - 2k - 3}{k(2k+3) - 1(2k+3)}$$

$$(2k+3)(k-1)$$

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$$\boxed{\frac{-1(2k-3)}{k-1} \text{ or } \frac{3-2k}{k-1}}$$