

Solve and list the restrictions

$$\frac{-1}{k-2} = \frac{5}{3k-6} + 2$$

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$$\frac{\cancel{3(k-2)} \cdot -1}{\cancel{k-2}} = \frac{5 \cdot \cancel{3(k-2)}}{\cancel{3k-6}} + 2 \cdot \cancel{3(k-2)}$$

$$3(-1) = 5 + 6(k-2)$$

$$-3 = \underline{5} + 6k - \underline{12}$$

$$\begin{array}{r} -3 = 6k - 7 \\ +7 \quad \quad +7 \end{array}$$

$$\frac{4}{6} = \frac{\cancel{6k}}{\cancel{6}} \quad \boxed{K = \frac{2}{3}}$$

Restrictions

$$k-2=0$$

$$k=2$$