

Find the
Partial Fraction decomposition

$$\frac{5x-34}{x^2-x-12} = \frac{A}{(x-4)} + \frac{B}{(x+3)}$$

$$5x-34 = A(x+3) + B(x-4)$$

$x = -3$ $x = 4$ Evaluate x

$$5(-3) - 34 = A(-3+3) + B(-3-4)$$
$$-15 - 34 = \textcircled{0} + -7B$$

$$\frac{-49}{-7} = \frac{-7B}{-7}$$

$$7 = B \quad \leftarrow$$

$$5(4) - 34 = A(4+3) + B(4-4)$$
$$20 - 34 = 7A + \textcircled{0}$$
$$\frac{-14}{7} = \frac{7A}{7}$$

$$-2 = A$$

$$= \frac{-2}{(x-4)} + \frac{7}{x+3}$$

$\textcircled{\text{yom}}$ 9/23/2019