

Solve Equation  $\frac{3}{y-4} - \frac{2}{y+1} = \frac{5}{y^2-3y-4}$

$$\frac{(y+1)(y-4)}{1} \left( \frac{3}{y-4} - \frac{2}{y+1} \right) = \left( \frac{5}{(y+1)(y-4)} \right) \frac{(y+1)(y-4)}{1}$$

$$\rightarrow 3(y+1) - 2(y-4) = 5$$

$$3y+3-2y+8=5$$

$$y+11=5$$

$$y = -6$$

$$\frac{2}{3} + \frac{5}{3}$$
$$\frac{2+5}{3}$$
$$\frac{7}{3}$$

$$\frac{5}{6} - \frac{1}{4}$$
$$\frac{5}{6} \cdot \frac{2}{2} - \frac{1}{4} \cdot \frac{3}{3}$$
$$\frac{10}{12} - \frac{3}{12}$$
$$\frac{7}{12}$$

$$\frac{5}{6} - \frac{1}{4}$$

$$\frac{5}{\underline{3 \cdot 2}} - \frac{1}{\underline{2 \cdot 2}}$$

$$\frac{2}{2} \cdot \frac{5}{3 \cdot 2} - \frac{1}{2 \cdot 2} \cdot \frac{3}{3}$$

Subtract  $\frac{3}{y-4} - \frac{2}{y+1}$

$$\frac{(y+1)}{(y+1)} \cdot \frac{3}{(y-4)} - \frac{2}{(y+1)} \cdot \frac{(y-4)}{(y-4)}$$

$$\rightarrow \frac{3(y+1) - 2(y-4)}{(y+1)(y-4)}$$

$$\frac{3y+3-2y+8}{(y+1)(y-4)}$$

$$\frac{y+11}{(y+1)(y-4)}$$

Expression

$$\frac{3}{x+2} - \frac{2}{x-5}$$

$$\frac{3}{3} - \frac{2}{-4}$$

$$1 + \frac{1}{2} = \frac{3}{2}$$

$$\frac{(x-5) \cdot \frac{3}{x+2} - \frac{2}{x-5} \cdot (x+2)}{(x-5)(x+2)}$$

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$$\frac{3(x-5) - 2(x+2)}{(x-5)(x+2)}$$

$$\frac{x-19}{(x-5)(x+2)} \xrightarrow{x=1} \frac{-18}{(-4)(3)} = \frac{+18}{+12} = \frac{3}{2}$$

$$\frac{1}{x^2 - 3x} + \frac{2}{x^2 - 9}$$

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

$$\frac{(x+3)}{(x+3)} \cdot \frac{1}{x(x-3)} + \frac{2}{(x+3)(x-3)} \cdot \frac{x}{x}$$

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

Stop  $\frac{3x+3}{x(x+3)(x-3)}$   $3(x+1)$

$$16^{\frac{1}{4}}$$

$$\sqrt[4]{16}$$

$$\textcircled{2}$$

$$(-25)^{\frac{1}{2}}$$

$$\sqrt{-25}$$

$$\textcircled{\text{DNE}}$$

$$x^{\frac{1}{2}} = \sqrt{x}$$

$$x^{\frac{m}{n}} = \sqrt[n]{x^m} = (\sqrt[n]{x})^m$$

$$8^{\frac{2}{3}}$$

$$\left(\sqrt[3]{8}\right)^2$$

$$2^2$$

$$\textcircled{4}$$

$$9^{-\frac{1}{2}}$$

$$\frac{1}{9^{\frac{1}{2}}}$$

$$\frac{1}{\sqrt{9}}$$

$$\frac{1}{3}$$

$$(5+4i)^2$$

$$(5+4i)(5+4i)$$

$$25 + \underbrace{20i + 20i}_{40i} + 16i^2$$

$$25 + 40i - 16$$

$$\boxed{9+40i}$$

$$\sqrt{-1} = i$$

$$i^2 = -1$$



$$y = \frac{6}{3-x}$$

$$x \neq 3$$

x	y
0	2
1	3
2	6
3	DNF
4	DNF
5	3
6	2



