

Add & Subtract Rational Expressions

1. Write each sum or difference as a single rational expression.

$$\text{a) } \frac{1}{2m-4n} - \frac{1}{2m+4n} - \frac{m}{m^2-4n^2}$$

$$\text{b) } \frac{1}{(2a-b)(a-c)} + \frac{1}{(b-c)(b-2a)}$$

$$\text{c) } \frac{1 + \frac{4x+3}{x^2+1}}{1 - \frac{x+7}{x^2+1}}$$

$$\text{d) } \frac{b^2+1}{b^2-4} + \frac{1}{b+2} + \frac{1}{b-2}$$

$$\text{e) } \frac{\frac{5x}{2} + 1}{\frac{5x}{4} - \frac{1}{5x}}$$

$$\text{f) } \frac{\frac{1}{a} - \frac{1}{2a}}{\frac{4}{a}}$$

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$$\text{a) } \frac{1}{2m-4n} - \frac{1}{2m+4n} - \frac{m}{m^2-4n^2}$$

$$-\frac{1}{m+2n}$$

$$\text{b) } \frac{1}{(2a-b)(a-c)} + \frac{1}{(b-c)(b-2a)}$$

$$\frac{b-a}{(a-c)(b-c)(2a-b)}$$

$$\text{c) } \frac{1 + \frac{4x+3}{x^2+1}}{1 - \frac{x+7}{x^2+1}}$$

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

$$\text{d) } \frac{b^2+1}{b^2-4} + \frac{1}{b+2} + \frac{1}{b-2}$$

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

$$\text{e) } \frac{\frac{5x}{2} + 1}{\frac{5x}{4} - \frac{1}{5x}}$$

$$\frac{10x}{5x-2}$$

$$\text{f) } \frac{\frac{1}{a} - \frac{1}{2a}}{\frac{4}{a}}$$

$$\frac{1}{8}$$

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