



Subtract rational expressions

- 1** Set up this fraction subtraction problem correctly

$$\frac{4}{7} - \frac{1}{14}$$

A $\frac{8}{14} - \frac{1}{14}$

B $\frac{4}{14} - \frac{1}{14}$

C $\frac{10}{14} - \frac{1}{14}$

- 2** Subtract these fractions, but don't simplify the answer

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

A $\frac{20}{10}$

B $\frac{8}{10}$

C $\frac{25}{10}$

D $\frac{3}{10}$

E $\frac{1}{10}$

F $\frac{10}{10}$

- 3** Set up the common denominator by multiplying each term by the missing factor over itself.

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

A $\frac{2}{x+3} \cdot \frac{x}{x} + \frac{5}{x} \cdot \frac{x+3}{x+3}$

B $\frac{2}{x+3} \cdot \frac{x}{x} + \frac{5}{x}$

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

D $\frac{2}{x+3} \cdot \frac{x+3}{x+3} + \frac{5}{x} \cdot \frac{x}{x}$

- 4** Add or subtract the rational expressions, grouping like terms in the numerator.

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

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

B $\frac{1}{(x-2)(x-5)}$

C $\frac{5x-19}{(x-2)(x-5)}$

D $\frac{x-11}{(x-2)(x-5)}$

- 5** Set up the common denominator by multiplying each term by the missing factor over itself.

$$\frac{9}{x^2-4} - \frac{7}{x^2-x-20}$$

A $\frac{9}{(x-2)(x+2)} \cdot \frac{(x-5)(x+4)}{(x-5)(x+4)} - \frac{7}{(x-5)(x+4)} \cdot \frac{(x-2)(x+2)}{(x-2)(x+2)}$

B $\frac{9}{(x-2)(x+2)} \cdot \frac{(x-5)(x+4)}{(x-5)(x+4)} - \frac{7}{(x-5)(x+4)}$

C $\frac{9}{(x-2)(x+2)} \cdot \frac{(x-5)(x+4)}{(x-5)(x+4)} + \frac{7}{(x-5)(x+4)} \cdot \frac{(x-2)(x+2)}{(x-2)(x+2)}$

D $\frac{9}{(x-2)(x+2)} \cdot \frac{(x-2)(x+2)}{(x-2)(x+2)} - \frac{7}{(x-5)(x+4)} \cdot \frac{(x-5)(x+4)}{(x-5)(x+4)}$



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Rewrite each term over the common denominator by carrying out the multiplication.

$$\frac{9}{x^2 + 6x + 5} + \frac{4}{x - 2}$$

A $\frac{9x - 18}{(x + 1)(x + 5)(x - 2)} + \frac{4}{(x + 1)(x + 5)(x - 2)}$

B $\frac{9x - 18}{(x + 1)(x + 5)(x - 2)} + \frac{4x^2 + 24x + 20}{(x + 1)(x + 5)(x - 2)}$

C $\frac{9x^2 + 54x + 45}{(x + 1)(x + 5)(x - 2)} + \frac{4x - 8}{(x + 1)(x + 5)(x - 2)}$

D $\frac{9}{(x + 1)(x + 5)(x - 2)} + \frac{4}{(x + 1)(x + 5)(x - 2)}$

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Add or subtract the rational expressions, grouping like terms in the numerator.

$$\frac{3}{x^2 - 9} - \frac{5}{x - 1}$$

A $\frac{3 - 5}{x^2 - 9 - x - 1}$

B $\frac{-5x^2 + 3x + 42}{(x + 3)(x - 3)(x - 1)}$

C $\frac{5x^2 + 3x - 48}{(x + 3)(x - 3)(x - 1)}$

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

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Add or subtract the rational expressions, grouping like terms in the numerator.

$$\frac{6}{x - 1} - \frac{4}{x - 3}$$

A $\frac{6 - 4}{x - 1 - x - 3}$

B $\frac{10x - 22}{(x - 1)(x - 3)}$

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

D $\frac{2x - 14}{(x - 1)(x - 3)}$

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Add or subtract the rational expressions, grouping like terms in the numerator.

$$\frac{2}{x + 4} - \frac{4}{x}$$

A $\frac{2 - 4}{x + 4 - x}$

B $\frac{-2}{(x + 4)x}$

C $\frac{-2x - 16}{(x + 4)x}$

D $\frac{6x + 16}{(x + 4)x}$

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Add or subtract the rational expressions, grouping like terms in the numerator.

$$\frac{2}{x^2 + 3x - 10} - \frac{9}{x^2 - 5x + 4}$$

A
$$\frac{2 - 9}{x^2 + 3x - 10 - x^2 - 5x + 4}$$

B
$$\frac{-7x^2 - 37x + 98}{(x + 5)(x - 2)(x - 1)(x - 4)}$$

C
$$\frac{-7}{(x + 5)(x - 2)(x - 1)(x - 4)}$$

D
$$\frac{11x^2 + 17x - 82}{(x + 5)(x - 2)(x - 1)(x - 4)}$$

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Add or subtract the rational expressions, grouping like terms in the numerator.

$$\frac{6}{x^2 - 4} - \frac{7}{x^2 - 25}$$

A
$$\frac{-x^2 - 122}{(x + 2)(x - 2)(x - 5)(x + 5)}$$

B
$$\frac{-1}{(x + 2)(x - 2)(x - 5)(x + 5)}$$

C
$$\frac{6 - 7}{x^2 - 4 - x^2 - 25}$$

D
$$\frac{13x^2 - 178}{(x + 2)(x - 2)(x - 5)(x + 5)}$$

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Add or subtract the rational expressions, grouping like terms in the numerator.

$$\frac{2}{x^2 - 7x + 12} + \frac{7}{x - 1}$$

A
$$\frac{2 + 7}{x^2 - 7x + 12 + x - 1}$$

B
$$\frac{-7x^2 + 51x - 86}{(x - 4)(x - 3)(x - 1)}$$

C
$$\frac{7x^2 - 47x + 82}{(x - 4)(x - 3)(x - 1)}$$

D
$$\frac{9}{(x - 4)(x - 3)(x - 1)}$$