



Add rational expressions with unlike denominators

- 1** Add these fractions, but don't simplify the answer

$$\frac{3}{7} + \frac{12}{21}$$

A $\frac{21}{21}$	B $\frac{2}{21}$	C $\frac{5}{21}$
D $\frac{3}{21}$	E $\frac{6}{21}$	F $\frac{18}{21}$

- 2** Set up this fraction addition problem correctly

$$\frac{1}{5} + \frac{1}{11}$$

A $\frac{22}{55} + \frac{5}{55}$	B $\frac{12}{60} + \frac{5}{60}$
C $\frac{11}{55} + \frac{5}{55}$	

- 3** Add these fractions, but don't simplify the answer

$$\frac{1}{7} + \frac{1}{3}$$

A $\frac{6}{21}$	B $\frac{14}{21}$	C $\frac{10}{21}$
D $\frac{1}{21}$	E 0	F $\frac{2}{21}$

- 4** Set up this fraction subtraction problem correctly

$$\frac{1}{2} - \frac{1}{11}$$

A $\frac{11}{22} - \frac{2}{22}$	B $\frac{22}{22} - \frac{2}{22}$
C $\frac{1}{11} - \frac{1}{11}$	

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

$$\frac{5}{x+4} + \frac{7}{x}$$

A $\frac{5}{x+4} \cdot \frac{x}{x} + \frac{7}{x} \cdot \frac{x+4}{x+4}$	B $\frac{5}{x+4} \cdot \frac{x}{x} + \frac{7}{x}$
C $\frac{5}{x+4} \cdot \frac{x+4}{x+4} + \frac{7}{x} \cdot \frac{x}{x}$	D $\frac{5}{x+4} \cdot \frac{x}{x} - \frac{7}{x} \cdot \frac{x+4}{x+4}$

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

$$\frac{8}{x-2} + \frac{8}{x}$$

A $\frac{8x}{(x-2)x} + \frac{8x-16}{(x-2)x}$	B $\frac{8x-16}{(x-2)x} + \frac{8x}{(x-2)x}$
C $\frac{8}{(x-2)x} + \frac{8}{(x-2)x}$	D $\frac{8x}{(x-2)x} + \frac{8}{(x-2)x}$

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

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

A $\frac{12}{(x+4)(x-2)}$	B $\frac{12x-6}{(x+4)(x-2)}$
C $\frac{6x-30}{(x+4)(x-2)}$	D $\frac{9+3}{x+4+x-2}$

- 8** Subtract these fractions and simplify the answer

$$\frac{1}{3} - \frac{1}{11}$$

A 1	B $\frac{2}{11}$	C 3
D $\frac{8}{33}$	E 2	F $\frac{2}{33}$



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Rewrite the expression with the denominators factored.

$$\frac{3}{x^2 - 7x + 10} + \frac{8}{x^2 - 7x + 12}$$

A $\frac{3}{(x-2)(x-5)} + \frac{8}{(x-4)(x-3)}$

B $\frac{3}{x^2 - 7x + 10} + \frac{8}{x^2 - 7x + 12}$

C $\frac{3}{(x+2)(x-5)} + \frac{8}{(x-4)(x-3)}$

D $\frac{3}{(x-1)(x-5)} + \frac{8}{(x-3)(x-3)}$

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

$$\frac{3}{x^2 - 4x + 3} + \frac{5}{x + 1}$$

A $\frac{3}{(x-1)(x-3)} \cdot \frac{x+1}{x+1} + \frac{5}{x+1} \cdot \frac{(x-1)(x-3)}{(x-1)(x-3)}$

B $\frac{3}{(x-1)(x-3)} \cdot \frac{x+1}{x+1} - \frac{5}{x+1} \cdot \frac{(x-1)(x-3)}{(x-1)(x-3)}$

C $\frac{3}{(x-1)(x-3)} \cdot \frac{(x-1)(x-3)}{(x-1)(x-3)} + \frac{5}{x+1} \cdot \frac{x+1}{x+1}$

D $\frac{3}{(x-1)(x-3)} \cdot \frac{x+1}{x+1} + \frac{5}{x+1}$

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

$$\frac{2}{x^2 - 16} + \frac{3}{x^2 + 3x + 2}$$

A $\frac{2}{(x+4)(x-4)(x+1)(x+2)} + \frac{3}{(x+4)(x-4)(x+1)(x+2)}$

B $\frac{2x^2 + 6x + 4}{(x+4)(x-4)(x+1)(x+2)} + \frac{3x^2 - 48}{(x+4)(x-4)(x+1)(x+2)}$

C $\frac{2x^2 + 6x + 4}{(x+4)(x-4)(x+1)(x+2)} + \frac{3}{(x+4)(x-4)(x+1)(x+2)}$

D $\frac{2x^2 - 32}{(x+4)(x-4)(x+1)(x+2)} + \frac{3x^2 + 9x + 6}{(x+4)(x-4)(x+1)(x+2)}$