

Precalculus Practice A.APR.D.7: Addition and Subtraction of Rationals 2

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NAME: _____

Add:

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

[A] $\frac{7}{x+5}$

[B] $\frac{7}{x^2-25}$

[C] $\frac{7x+5}{x^2-25}$

[D] $\frac{7x+5}{7}$

2. $\frac{4}{x+8} + \frac{3}{x-8}$

[A] $\frac{7}{x+8}$

[B] $\frac{7x-8}{7}$

[C] $\frac{7x-8}{x^2-64}$

[D] $\frac{7}{x^2-64}$

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

[A] $\frac{11}{x+1}$

[B] $\frac{11x+7}{x^2-1}$

[C] $\frac{11}{x^2-1}$

[D] $\frac{11x+7}{11}$

4. $\frac{7}{x+3} + \frac{4}{x-3}$

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

6. $\frac{5}{x+1} + \frac{8}{x-1}$

7. $\frac{7}{x+5} + \frac{2}{x-5}$

8. $\frac{2}{c-3} + \frac{2}{c^2-9}$

[A] $\frac{4c}{(c-3)(c+3)}$

[B] $\frac{2(c-2)}{(c-3)(c+3)}$

[C] $\frac{2(c+4)}{(c-3)(c+3)}$

[D] $\frac{4}{(c-3)(c+3)}$

9. $\frac{5}{n-4} + \frac{5}{n^2-16}$

[A] $\frac{5(n+5)}{(n-4)(n+4)}$

[B] $\frac{5(n-3)}{(n-4)(n+4)}$

[C] $\frac{10n}{(n-4)(n+4)}$

[D] $\frac{10}{(n-4)(n+4)}$

10. $\frac{6}{q+5} + \frac{6}{q^2-25}$

[A] $\frac{6(q+6)}{(q+5)(q-5)}$

[B] $\frac{6(q-4)}{(q+5)(q-5)}$

[C] $\frac{12}{(q+5)(q-5)}$

[D] $\frac{12q}{(q+5)(q-5)}$

Simplify:

11. $\frac{x^2-x-2}{x^2+10x+9} - \frac{1}{x+9}$

12. $\frac{x^2-7x-8}{x^2+7x+6} - \frac{1}{x+6}$

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Simplify:

13. $\frac{x^2 - 1}{x^2 + 6x + 5} - \frac{1}{x + 5}$

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

Subtract:

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

[A] $\frac{2x^2 - 6x + 11}{(x + 4)(x - 1)(x + 1)}$

[B] $\frac{2x^2 - 2x - 5}{(x + 4)(x - 1)(x + 1)}$

[C] $\frac{-6x + 11}{(x + 4)(x - 1)(x + 1)}$

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

16. $\frac{x + 1}{x^2 - 5x + 6} - \frac{x + 4}{x^2 - 9}$

[A] $\frac{2x + 11}{(x - 2)(x + 3)(x - 3)}$

[B] $\frac{6x - 5}{(x - 2)(x + 3)(x - 3)}$

[C] $\frac{2x^2 + 2x + 11}{(x - 2)(x + 3)(x - 3)}$

[D] $\frac{2x^2 + 6x - 5}{(x - 2)(x + 3)(x - 3)}$

17. $\frac{x + 4}{x^2 - x - 2} - \frac{x - 3}{x^2 - 4}$

[A] $\frac{2x^2 + 4x + 5}{(x + 1)(x + 2)(x - 2)}$

[B] $\frac{8x + 11}{(x + 1)(x + 2)(x - 2)}$

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

[D] $\frac{2x^2 + 8x + 11}{(x + 1)(x + 2)(x - 2)}$

Add:

18. $\frac{4}{x} - \frac{2}{x + 2} + \frac{3}{x(x + 2)}$

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

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

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[1] \underline{C}

[2] \underline{C}

[3] \underline{B}

[4] $\frac{11x-9}{x^2-9}$

[5] $\frac{11x-42}{x^2-36}$

[6] $\frac{13x+3}{x^2-1}$

[7] $\frac{9x-25}{x^2-25}$

[8] \underline{C}

[9] \underline{A}

[10] \underline{B}

[11] $\frac{x-3}{x+9}$

[12] $\frac{x-9}{x+6}$

[13] $\frac{x-2}{x+5}$

[14] $\frac{x-1}{x+2}$

[15] \underline{C}

[16] \underline{A}

[17] \underline{B}

[18] $\frac{2x+11}{x(x+2)}$

[19] $\frac{-2x+12}{x(x-2)}$

[20] $\frac{-x-2}{x(x+1)}$
