Math II Adding and Subtracting Rationals with LIKE DENOMINATORS

1. $\frac{x-4}{3}+\frac{5x}{3}$
2. $\frac{2x+5}{7}-\frac{x}{7}$
3. $\frac{8}{x}+\frac{x+9}{x}$
4. $\frac{3x-8}{4x}+\frac{-x+8}{4x}$
5. $\frac{3x-6}{24x}+\frac{3x+6}{24x}$
6. $\frac{2x+3}{x+5}-\frac{x-3}{x+5}$
7. $\frac{2x+3}{x+4}-\frac{x-7}{x+4}$
8. $\frac{8}{3(x+8)}+\frac{4}{3(x+8)}$
9. $\frac{3}{2(x-9)}+\frac{9}{2(x-9)}$
10. $\frac{7}{3(x-1)}+\frac{5}{3(x-1)}$
11. $\frac{4x+7}{x+5}-\frac{x-6}{x+5}$
12. $\frac{-2x+1}{x^2-4}-\frac{-3x-1}{x^2-4}$
13. $\frac{5x+1}{x^2-64}-\frac{4x-7}{x^2-64}$
14. $\frac{2x^2+7x-3}{x^2+4x-12}-\frac{2x^2+6x-1}{x^2+4x-12}$
15. $\frac{3x-4}{x^2-5x+4}+\frac{3-2x}{x^2-5x+4}$
16. $\frac{5x-4}{x^2-6x-7}+\frac{5-4x}{x^2-6x-7}$
17. $\frac{3x-8}{x^2-9}-\frac{2x-5}{x^2-9}$
18. $\frac{4x-7}{x^2-25}-\frac{3x-2}{x^2-25}$

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

$x-4+5x$

$\frac{6x-4}{3} \rightarrow \boxed{\frac{2(3x-2)}{3}}$

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

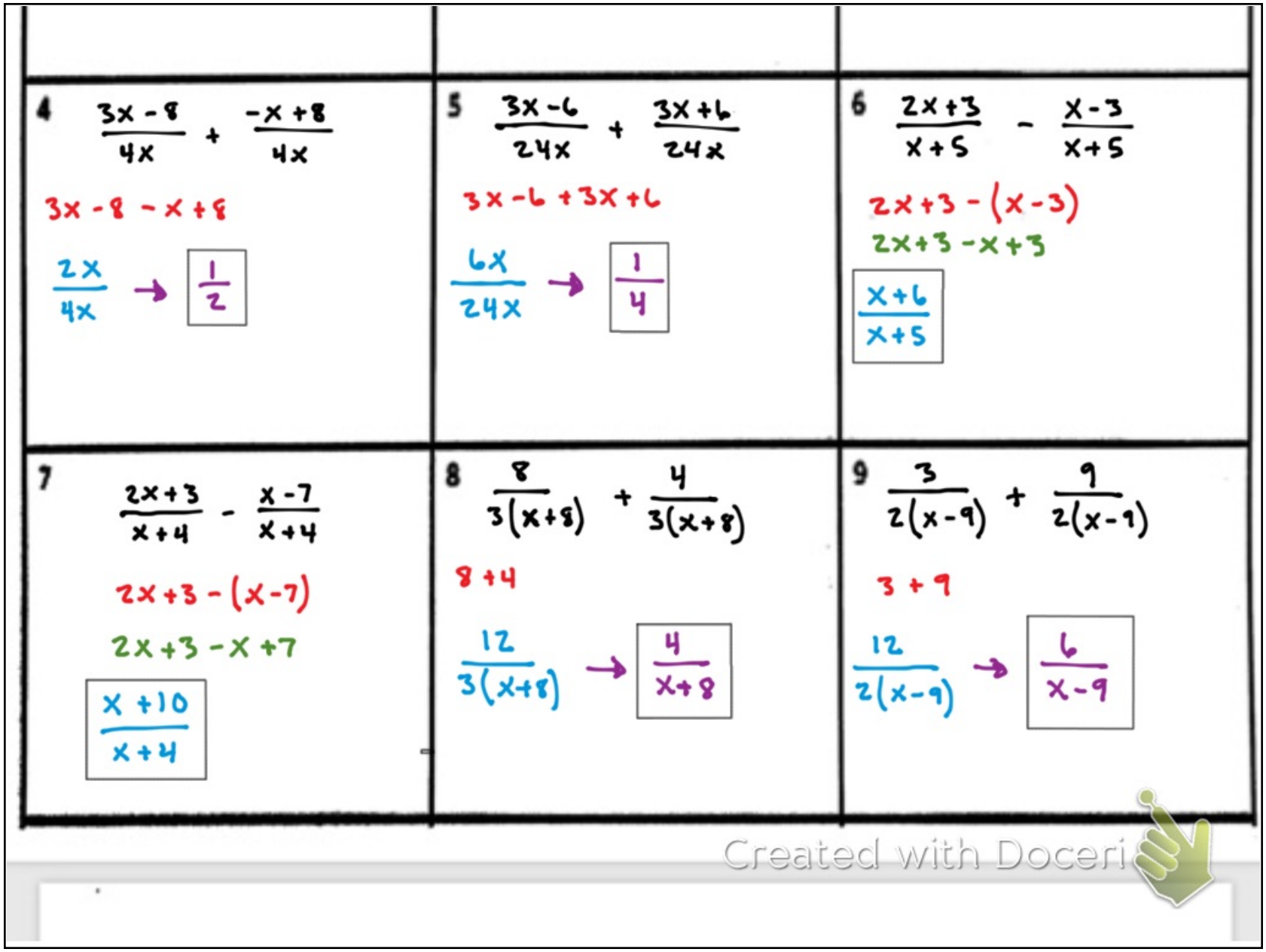
$2x+5-x$

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

3 $\frac{8}{x}+\frac{x+9}{x}$

$8+x+9$

$\boxed{\frac{x+17}{x}}$


4 $\frac{3x-8}{4x} + \frac{-x+8}{4x}$
$3x-8-x+8$
$\frac{2x}{4x} \rightarrow \frac{1}{2}$
5 $\frac{3x-6}{24x} + \frac{3x+6}{24x}$
$3x-6+3x+6$
$\frac{6x}{24x} \rightarrow \frac{1}{4}$
6 $\frac{2x+3}{x+5} - \frac{x-3}{x+5}$
$2x+3-(x-3)$
$2x+3-x+3$
$\frac{x+6}{x+5}$
7 $\frac{2x+3}{x+4} - \frac{x-7}{x+4}$
$2x+3-(x-7)$
$2x+3-x+7$
$\frac{x+10}{x+4}$
8 $\frac{8}{3(x+8)} + \frac{4}{3(x+8)}$
$8+4$
$\frac{12}{3(x+8)} \rightarrow \frac{4}{x+8}$
9 $\frac{3}{2(x-9)} + \frac{9}{2(x-9)}$
$3+9$
$\frac{12}{2(x-9)} \rightarrow \frac{6}{x-9}$
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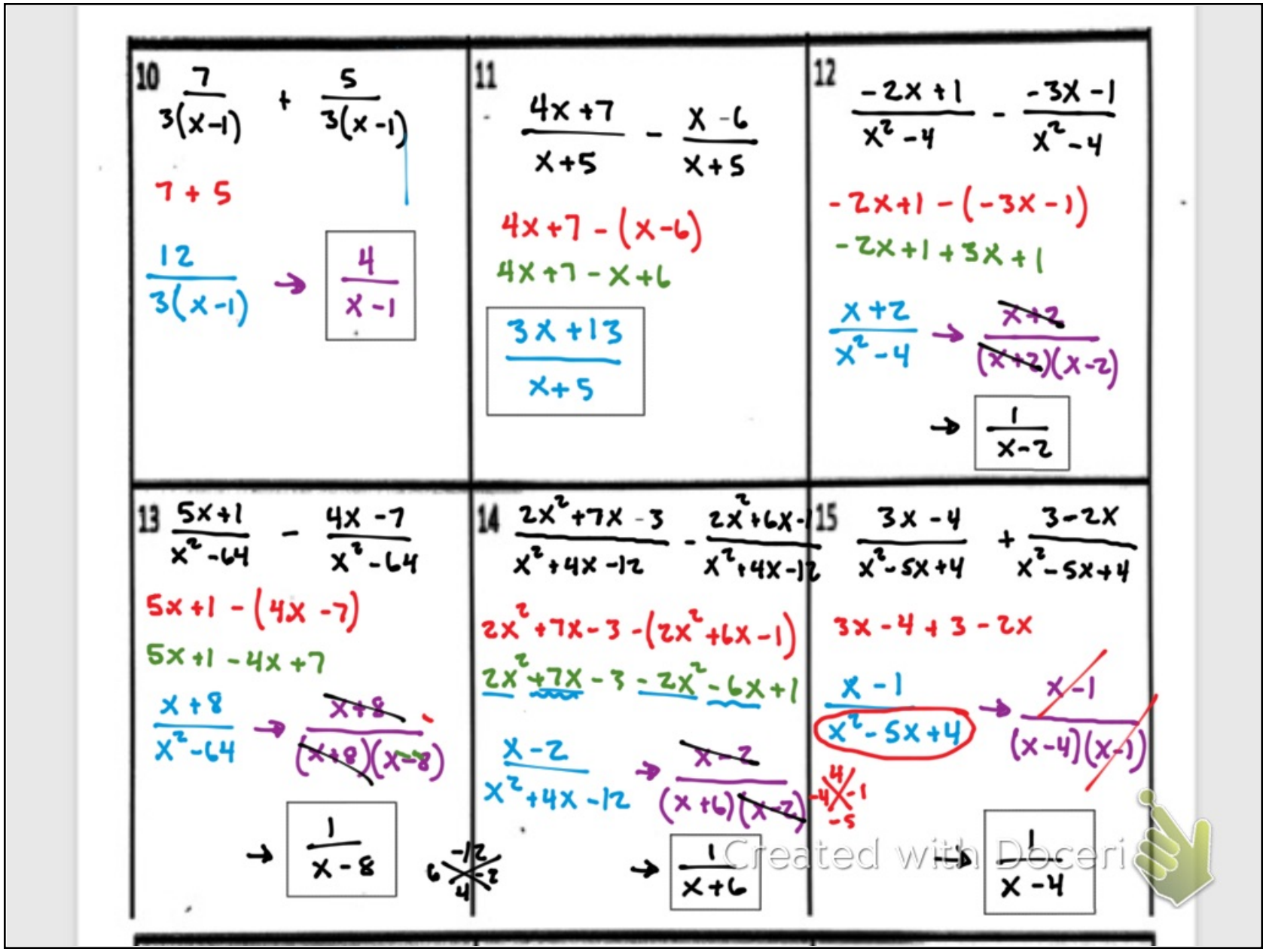
10 $\frac{7}{3(x-1)} + \frac{5}{3(x-1)}$
$7+5$
$\frac{12}{3(x-1)} \rightarrow \frac{4}{x-1}$
11 $\frac{4x+7}{x+5} - \frac{x-6}{x+5}$
$4x+7-(x-6)$
$4x+7-x+6$
$\frac{3x+13}{x+5}$
12 $\frac{-2x+1}{x^2-4} - \frac{-3x-1}{x^2-4}$
$-2x+1-(-3x-1)$
$-2x+1+3x+1$
$\frac{x+2}{x^2-4} \rightarrow \frac{x+2}{(x+2)(x-2)}$
$\rightarrow \frac{1}{x-2}$
13 $\frac{5x+1}{x^2-64} - \frac{4x-7}{x^2-64}$
$5x+1-(4x-7)$
$5x+1-4x+7$
$\frac{x+8}{x^2-64} \rightarrow \frac{x+8}{(x+8)(x-8)}$
$\rightarrow \frac{1}{x-8}$
14 $\frac{2x^2+7x-3}{x^2+4x-12} - \frac{2x^2+6x-1}{x^2+4x-12}$
$2x^2+7x-3-(2x^2+6x-1)$
$2x^2+7x-3-2x^2-6x+1$
$\frac{x-2}{x^2+4x-12} \rightarrow \frac{x-2}{(x+6)(x-2)}$
$\rightarrow \frac{1}{x+6}$
15 $\frac{3x-4}{x^2-5x+4} + \frac{3-2x}{x^2-5x+4}$
$3x-4+3-2x$
$\frac{x-1}{x^2-5x+4} \rightarrow \frac{x-1}{(x-4)(x-1)}$
$\rightarrow \frac{1}{x-4}$
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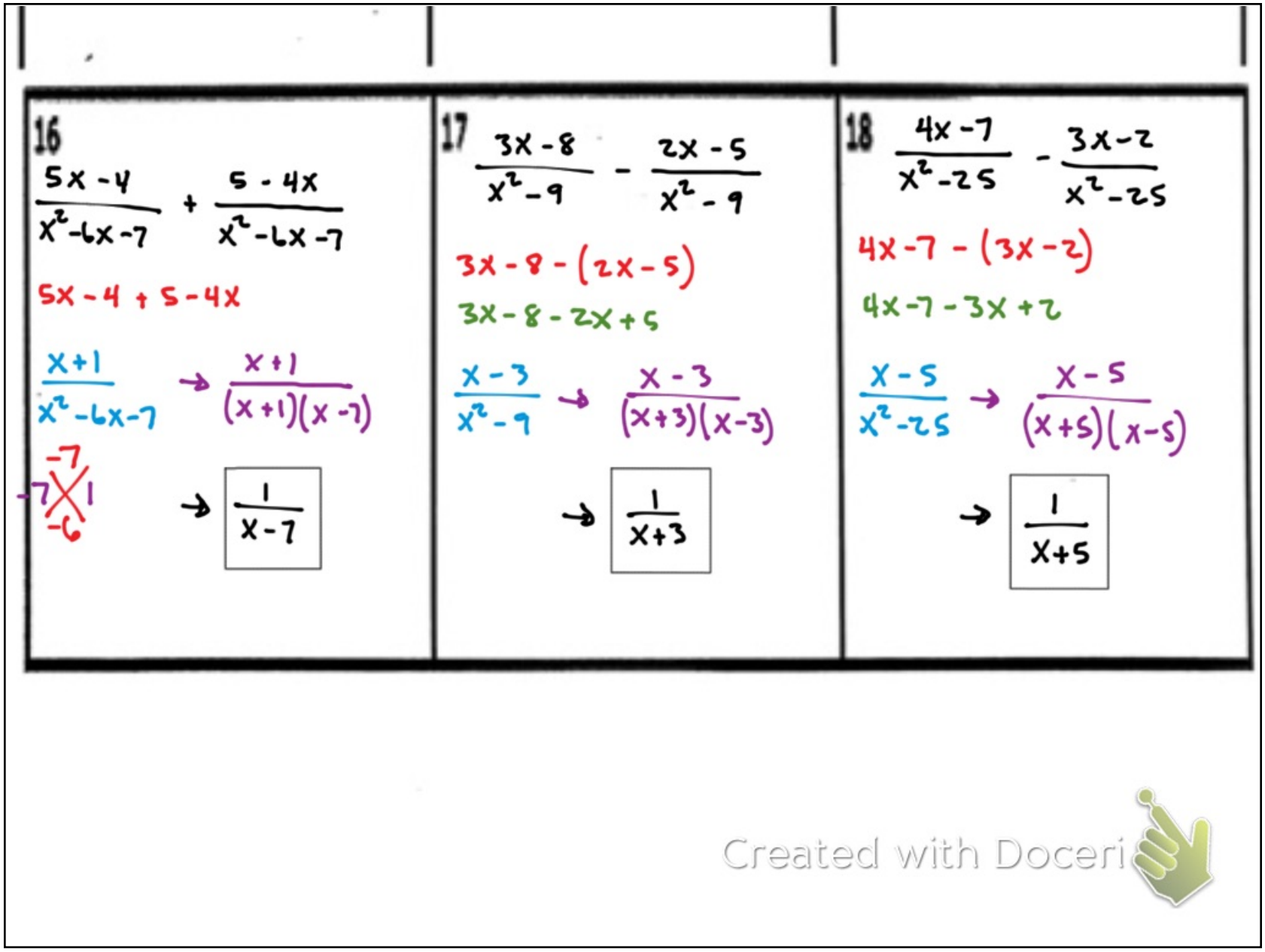
16
$\frac{5x-4}{x^2-6x-7} + \frac{5-4x}{x^2-6x-7}$
$5x-4+5-4x$
$\frac{x+1}{x^2-6x-7} \rightarrow \frac{x+1}{(x+1)(x-7)}$
-7
-7
1
-6
$\rightarrow \frac{1}{x-7}$
17
$\frac{3x-8}{x^2-9} - \frac{2x-5}{x^2-9}$
$3x-8-(2x-5)$
$3x-8-2x+5$
$\frac{x-3}{x^2-9} \rightarrow \frac{x-3}{(x+3)(x-3)}$
$\rightarrow \frac{1}{x+3}$
18
$\frac{4x-7}{x^2-25} - \frac{3x-2}{x^2-25}$
$4x-7-(3x-2)$
$4x-7-3x+2$
$\frac{x-5}{x^2-25} \rightarrow \frac{x-5}{(x+5)(x-5)}$
$\rightarrow \frac{1}{x+5}$
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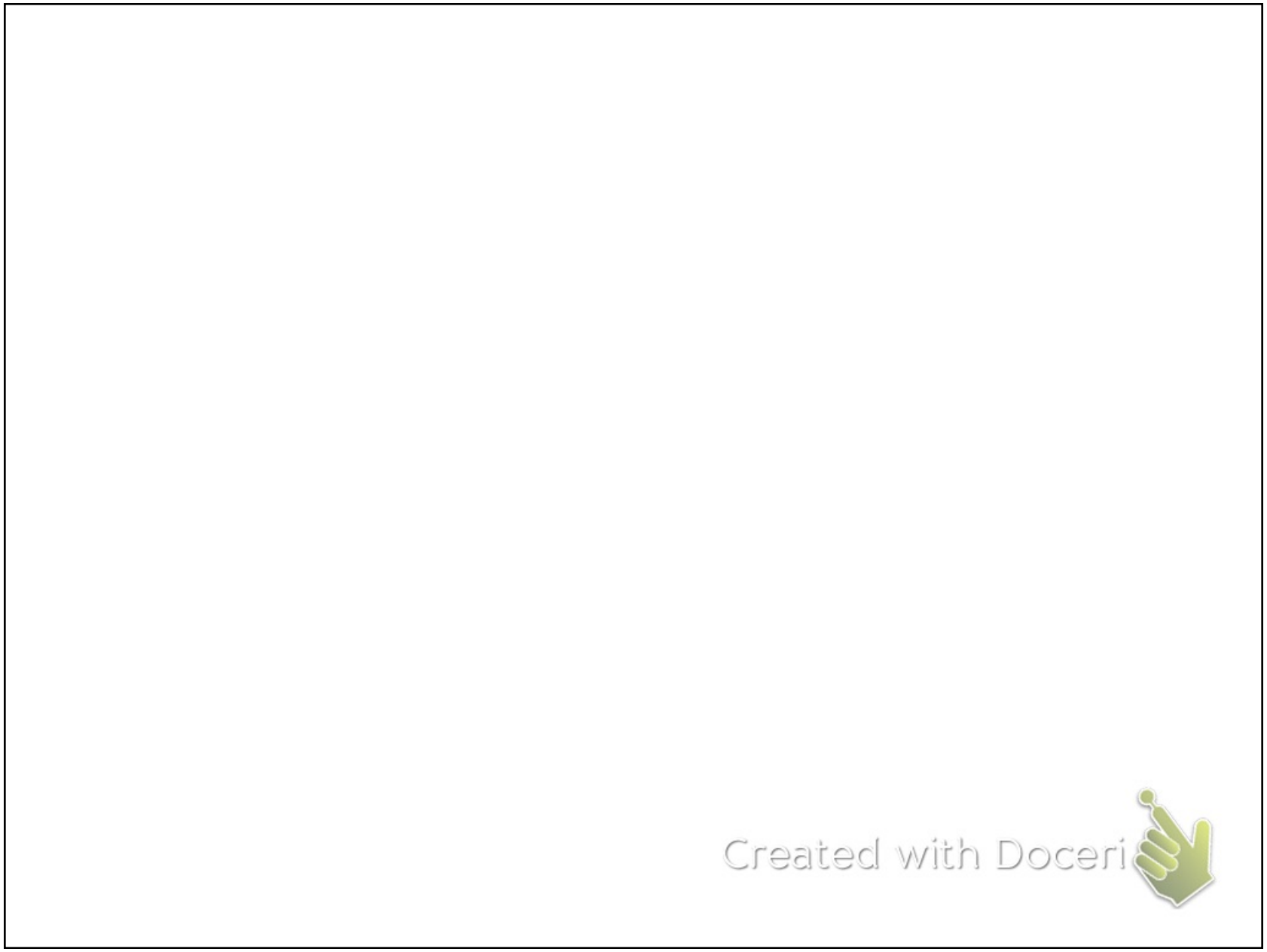
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