Add & Subtract Rational Expressions

Unit B.2

What is $\frac{1}{5}+\frac{2}{5}$?

Adding rational expressions works the same way!

$$\frac{4}{2x}+\frac{3}{2x}=\frac{7}{2x}$$

This works because we already have a _____.

Practice adding rational expressions that already have a common denominator:

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

2. $\dfrac{3x}{x-2} - \dfrac{x}{x-2}$

3. $\dfrac{x+4}{x^2+2x-3} - \dfrac{1}{x^2+2x-3}$

Be sure to simplify your answer!

Practice adding rational expressions that have unlike denominators:

4. $\frac{1}{6}+\frac{2x+1}{3x}$

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

6. $\dfrac{7}{x+4}-2$

7. $\dfrac{2x}{x+5}-\dfrac{3}{x-1}$

8. $\dfrac{6x+4}{x-1}+\dfrac{5}{x^2-1}$

9. $\dfrac{2}{x+3}-\dfrac{x-1}{x-2}+\dfrac{4}{x^2+x-6}$

10. $\dfrac{7}{9x^2}+\dfrac{x}{3x^2+3x}$

11. $\dfrac{x+1}{x^2+4x+4}+\dfrac{6}{x^2-4}$