

Main Ideas/Questions	Notes/Examples
ADDING & SUBTRACTING Rational Expressions (*with LIKE BASES)	To add or subtract rational expression with a common denominator:
	① Combine the numerators and keep the common denominator.
	② Factor and simplify the remaining expression.
	Example: $\frac{x^2 + 5x}{4x^2 + 5x - 6} - \frac{3x}{4x^2 + 5x - 6}$

1. $\frac{x^2 + 1}{x^2 - 4} + \frac{5x}{x^2 - 4} - \frac{2x + 11}{x^2 - 4}$	2. $\frac{4d^2}{6d^3 - 42d^2} - \frac{28d}{6d^3 - 42d^2}$
3. $\frac{2g^2 - g}{4g^2 - 25} - \frac{15}{4g^2 - 25}$	4. $\frac{5w}{2w^2 + w - 1} - \frac{3w + 1}{2w^2 + w - 1}$

ADDING & SUBTRACTING Rational Expressions (*with UNLIKE BASES)	To add or subtract rational expression without a common denominator:	
	①	Find a common denominator!
	②	Rewrite the fractions using the common denominator. Adjust each numerator to reflect the change in the denominator.
	③	Add/Subtract the numerators and keep the common denominator.
	④	Simplify (if needed).
Example 1: $\frac{x}{3} + \frac{x}{2}$	Example 2: $\frac{a + 10}{6} - \frac{2a - 1}{30}$	
Example 3: $\frac{k + 24}{5k + 20} + \frac{k}{k + 4}$	Example 4: $\frac{4r}{r - 1} - \frac{28r}{r^2 + 5r - 6}$	

7. $\frac{1}{x-7} + \frac{6}{2x-14}$	8. $\frac{6k}{k^2-9} + \frac{k}{k+3}$
9. $\frac{w}{w+2} - \frac{8}{w^2-4}$	10. $\frac{1}{m-5} + \frac{2m-19}{m^2-m-20}$
11. $\frac{g^2+4g}{g^2+6g+8} + \frac{3}{g+2}$	12. $\frac{4a}{a^2+6a+5} + \frac{1}{a+1}$
13. $\frac{5}{p^2-p-6} + \frac{1}{p+2}$	14. $\frac{4}{4z-1} + \frac{8z-15}{4z^2+11z-3}$
15. $\frac{r^2+8r-12}{2r^2-5r-3} - \frac{3}{r-3}$	16. $\frac{5x}{x+2} - \frac{x}{x-1} + \frac{3}{x^2+x-2}$