

Rational Expressions One – Addition and Subtraction

$$1. \frac{6x+3}{x+y} + \frac{4}{x+y} = \frac{(6x+7)}{(x+y)}$$

$$2. \frac{2}{x-y} + \frac{3x+5}{x-y} = \frac{(3x+7)}{(x-y)}$$

$$3. \frac{5x+1}{y+x} - \frac{3}{y+x} = \frac{(5x-2)}{(y+x)}$$

$$4. \frac{7x-1}{x-5} - \frac{2x+3}{x-5} = \frac{(5x-4)}{(x-5)}$$

$$5. \frac{x^2}{x-2} - \frac{4x}{x-2} + \frac{4}{x-2} = (x-2)$$

$$6. \frac{y^2}{y-3} - \frac{6y}{y-3} + \frac{9}{y-3} = (y-3)$$

$$7. \frac{x}{x^2-9} - \frac{1}{2x-6} = \frac{1}{2(x+3)}$$

$$8. \frac{y}{y^2-16} + \frac{2}{2y-12} = \frac{(5y+8)}{3(y+4)(y-4)}$$

$$9. \frac{x-3y}{x+y} + \frac{x+5y}{x+y} = 2$$

$$10. \frac{4y+3}{y-2} - \frac{y-2}{y-2} = \frac{(3y+5)}{(y-2)}$$

$$11. \frac{x^2}{x-y} + \frac{y^2}{y-x} = (x+y)$$

$$12. \frac{3}{x} - \frac{8}{-x} = \frac{11}{x}$$

$$13. \frac{2y-10}{y^2-25} - \frac{5-x}{25-x^2} = \frac{1}{(x+5)}$$

$$14. \frac{x-2}{x+4} + \frac{x+3}{x-5} = \frac{2(x^2+11)}{(x-5)(x+4)}$$

$$15. \frac{4ab}{a^2-b^2} + \frac{a-b}{a+b} = \frac{(a+b)}{(a-b)}$$

$$16. \frac{9x+2}{3x^2-2x-8} + \frac{7}{3x^2+x-4} = \frac{(3x-4)}{(x-2)(x-1)}$$

$$17. \frac{x-5y}{x+y} + \frac{x+7y}{x+y} = 2$$

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

$$19. \frac{x^2}{x-y} + \frac{y^2}{y-x} = (x+y)$$

$$20. \frac{2}{z} - \frac{5}{-z} = \frac{7}{z}$$

$$21. \frac{x-9}{x^2-16} - \frac{7-x}{16-x^2} = \frac{-2}{(y+4)(y-4)}$$

$$22. \frac{x-2}{x+3} + \frac{x+2}{x-4} = \frac{2x^2-x+14}{(x+3)(x-4)}$$

$$23. \frac{5xy}{x^2-y^2} + \frac{x+y}{x-y} = \frac{x^2+7xy+b^2}{(x+y)(x-y)}$$

$$24. \frac{3y+2}{2y^2-y-10} + \frac{8}{2y^2-7y+5} = \frac{3y^2+7y+14}{(2y-5)(y+2)(y-1)}$$

$$25. \frac{x-1}{3x+15} - \frac{x+3}{5x+25} = \frac{2(x-7)}{3 \cdot 5(x+5)}$$

$$26. \frac{x-2}{4x+8} - \frac{x+6}{5x+10} = \frac{(x-34)}{4 \cdot 5(x+2)}$$