

Reduction au même dénominateur.

$$1^o) \frac{3}{2n} + \frac{2}{n+1} = \frac{3(n+1) + 2 \times 2n}{2n(n+1)} = \frac{3n+3+4n}{2n(n+1)} = \frac{7n+3}{2n(n+1)}$$

On ne développe jamais le dénominateur

$$2^o) \frac{-5n}{3} + \frac{7}{4} = \frac{-5n \times 4 + 7 \times 3}{12} = \frac{-20n+21}{12}$$

$$3^o) \frac{5n-1}{n+1} + \frac{6}{5} = \frac{(5n-1) \times 5 + 6(n+1)}{5(n+1)} = \frac{25n-5+6n+6}{5(n+1)} = \frac{31n+1}{5(n+1)}$$

$$4^o) \frac{3n-1}{2} + \frac{n-3}{3} = \frac{3(3n-1) + 2(n-3)}{6} = \frac{11n-9}{6}$$

$$5^o) \frac{5n+3}{2n+1} + \frac{7}{2} = \frac{5n+3-7(2n+2)}{2n+1} = \frac{5n+3-14n-7}{2n+1} = \frac{-9n-4}{2n+1}$$

$$6^o) \frac{3}{n+1} + \frac{n+8}{3n} = \frac{3 \times 3n + (n+1)(n+8)}{(n+1)(3n)} \\ = \frac{9n + n^2 + 8n + n + 8}{3n(n+1)} = \frac{n^2 + 18n + 8}{3n(n+1)}$$

$$7^o) \frac{2n-8}{3} + \frac{6n-5}{n} = \frac{n(2n-8) - 3(6n-5)}{3n} = \frac{2n^2-8n-18n+15}{3n} \\ = \frac{2n^2-26n+15}{3n}$$

$$8^o) \frac{n+7}{n+3} + \frac{2n+1}{3-n} = \frac{(n+7)(3-n) + (2n+1)(n+3)}{(n+3)(3-n)} \\ = \frac{3n - n^2 + 21 - 7n + 2n^2 + 6n + n + 3}{(n+3)(3-n)} = \frac{n^2 + 3n + 24}{(n+3)(3-n)}$$

$$9^o) \frac{n^2+2n-4}{3} + \frac{3n-8}{7} = \frac{7(n^2+2n-4) - 3(3n-8)}{21} \\ = \frac{7n^2+14n-28-9n+24}{21} = \frac{7n^2+5n-4}{21}$$

$$10^o) \frac{(4n-1)}{(n-1)} - \frac{7}{3} = \frac{-4n+1}{n-1} + \frac{7}{3} \\ = \frac{3(-4n+1) - 7(n-1)}{3(n-1)} = \frac{-12n+3-7n+7}{3(n-1)} \\ = \frac{-19n+10}{3(n-1)}$$

$$119) \frac{2n}{3} + \frac{7}{3n-2} = \frac{2n(3n-2) + 7 \times 3}{3(3n-2)} = \frac{6n^2 - 4n + 21}{3(3n-2)}$$

$$120) \frac{-4-3y}{2} + \frac{7}{3y-1} = \frac{(-4-3y)(3y-1) + 7 \times 2}{2(3y-1)}$$

$$= \frac{-12y + 4 - 9y^2 + 3y + 14}{2(3y-1)} = \frac{-9y^2 - 9y + 18}{2(3y-1)}$$

$$130) \frac{4n+2}{5n} - \frac{3}{n+1} = \frac{-4n-2}{5n} - \frac{3}{n+1}$$

$$= \frac{(n+1)(-4n-2) - 3 \times 5n}{5n(n+1)} = \frac{-4n^2 - 2n - 4n - 2 - 15n}{5n(n+1)} = \frac{-4n^2 - 21n - 2}{5n(n+1)}$$

$$140) \frac{n+7}{10} + \frac{10}{1-2n} = \frac{(n+7)(1-2n) + 100}{10(1-2n)} = \frac{-2n^2 - 13n + 107}{10(1-2n)}$$

$$150) \frac{3n+1}{5} - \frac{5}{3n+1} = \frac{(3n+1)^2 - 5^2}{5(3n+1)}$$

Identifizierbare
 $a^2 - b^2 = (a-b)(a+b)$

$$= \frac{((3n+1)-5)((3n+1)+5)}{5(3n+1)} = \frac{(3n-4)(3n+6)}{5(3n+1)}$$

$$160) \frac{4}{3} + \frac{x}{1} = \frac{4+3x}{3}$$

$$170) \frac{7n-5}{1} - \frac{3}{n-1} = \frac{(7n-5)(n-1) - 3}{n-1} = \frac{7n^2 - 7n - 5n + 5 - 3}{n-1} = \frac{7n^2 - 12n + 2}{n-1}$$

$$180) \frac{2n}{n-8} + 2 = \frac{2n + 2(n-8)}{n-8} = \frac{4n-16}{n-8}$$

$$190) \frac{2n+9}{7} + \frac{n+8}{n-3} = \frac{-2n-9}{7} + \frac{n+8}{n-3}$$

$$= \frac{(-2n-9)(n-3) + 7(n+8)}{7(n-3)} = \frac{-2n^2 + 6n - 9n + 27 + 7n + 56}{7(n-3)}$$

$$= \frac{-2n^2 + 4n + 83}{7(n-3)}$$

$$200) \frac{5n-9}{9n} + \frac{3n+1}{3} = \frac{3(5n-9) + 9n(3n+1)}{27n} = \frac{15n - 27 + 27n^2 + 9n}{27n}$$

$$= \frac{27n^2 + 24n - 27}{27n} = \frac{3(9n^2 + 8n - 9)}{3 \times 9n}$$

$$= \frac{9n^2 + 8n - 9}{9n}$$