## Enunciados

Escribe de la manera más sencilla que sea posible (polinomio o fracción algebraica irreducible) el resultado de las siguientes operaciones.

① $\left(\dfrac{1}{x+3}-\dfrac{1}{x}\right):\dfrac{3}{x}$

② $\left(\dfrac{5}{x-5}-\dfrac{x}{x-5}\right)\cdot(4-3x)$

③ $\left(1-\dfrac{2}{x+6}\right):\left(x+\dfrac{8}{x+6}\right)$

④ $x\cdot\left(\dfrac{1}{x+1}+\dfrac{1}{x(x+1)}\right)$

⑤ $\left(1+\dfrac{8}{x^2-9}\right)\cdot\dfrac{x+3}{x^2-1}$

⑥ $\dfrac{2x}{x+1}:\left(2-\dfrac{2x}{x+1}\right)$

⑦ $\left(x+\dfrac{2x+1}{x}\right):\left(x-\dfrac{1}{x}\right)$

⑧ $\left(x+3-\dfrac{4}{x+3}\right)\cdot\left(x+\dfrac{6}{x+5}\right)$

⑨ $\left(1+\dfrac{4}{2}-\dfrac{5}{x^2}\right):\left(\dfrac{x^2+x-2}{x^2}\right)$

⑩ $\left(2-\dfrac{2x-6}{x+1}\right)\cdot\dfrac{x^2-1}{4}\cdot\left(3-\dfrac{3x-4}{x-1}\right)$

⑪ $\dfrac{x^4-1}{4}\cdot\left(\dfrac{x+1}{x-1}-\dfrac{x-1}{x+1}\right)$

⑫ $\left(x^2-\dfrac{1}{x}\right):\left(x^4-\dfrac{1}{x^2}\right)$

⑬ $\left(\dfrac{1}{x+6}-\dfrac{1}{(x+6)^2}\right)\cdot\left(\dfrac{1}{x+5}+\dfrac{1}{(x+5)^2}\right)$

⑭ $\dfrac{20x}{x-2}:\dfrac{2x^2}{x^2-4}:\dfrac{5x-10}{x}$

⑮ $\left(\dfrac{3}{x+3}+\dfrac{1}{x-5}\right)\cdot\left(\dfrac{7}{x+2}-\dfrac{2}{x-3}\right)$

⑯ $\left(1-\dfrac{1}{x^2}\right):\left(1-\dfrac{1}{x^3}\right)$

## Soluciones

① $\dfrac{1}{x+3}$

② $3x-4$

③ $\dfrac{1}{x+2}$

④ $1$

⑤ $\dfrac{1}{x-3}$

⑥ $x$

⑦ $\dfrac{x+1}{x-1}$

⑧ $x^2+3x+2$

⑨ $\dfrac{x+5}{x+2}$

⑩ $2$

⑪ $x^2+1$

⑫ $\dfrac{x}{x^3+1}$

⑬ $\dfrac{1}{(x+5)(x+6)}$

⑭ $2$

⑮ $\dfrac{20}{(x+2)(x+3)}$

⑯ $\dfrac{x^2+x}{x^2+x+1}$