



Objetivo: Reducir expresiones algebraicas, usando propiedades respectivas

Contenidos: Operatoria algebraica

GUIA DE REDUCION DE EXPRESIONES ALGEBRAICAS

Desarrollar usando las propiedades respectivas

1. $\frac{m-n}{mn} + \frac{n-a}{an} + \frac{2a-m}{am} =$

$$\frac{1}{m}$$

2. $\frac{2a-3}{3a} + \frac{3x+2}{10x} + \frac{x-a}{5ax} =$

$$\frac{29a-24}{30a}$$

3. $\frac{1}{3x+3} + \frac{1}{2x-2} + \frac{1}{x^2-1} =$

$$\frac{5x+7}{6(x^2-1)}$$

4. $\frac{a-3}{5ab} - \frac{4-3ab^2}{3a^2b^3} =$

$$\frac{3a^2b^2+6ab^2-20}{15a^2b^3}$$

5. $\frac{2a^2-3}{10a+10} - \frac{a+1}{50} - \frac{9a^2-14}{50a+50} =$

$$\frac{-1}{25}$$

6. $\frac{x}{2x+2} - \frac{x+1}{3x-3} + \frac{x-1}{6x+6} - \frac{5}{18x-18} =$

$$\frac{3x^2-16x-4}{9(x^2-1)}$$

7. $\frac{3}{2a+2} - \frac{1}{4a-4} - \frac{4}{8-8a^2} =$

$$\frac{5}{4(a+1)}$$

8. $\frac{m+n}{mn-n^2} \cdot \frac{n^2}{m^2-n^2} =$

$$\frac{n}{(m-n)^2}$$

9. $\frac{a^2-5a+6}{3a-15} - \frac{6a}{a^2-a-30} - \frac{a^2-25}{2a-4} =$

$$\frac{a^2-3a}{a-6}$$



$$10. \left(1 + \frac{a}{b}\right) \left(1 - \frac{a}{b}\right) \left(1 + \frac{b^2}{a^2 - b^2}\right)$$

$$\frac{a}{b}$$

$$11. \frac{20x^2 - 30x}{15x^3 + 15x^2} : \frac{4x - 6}{x + 1} =$$

$$\frac{1}{3x}$$

$$12. \left(x + \frac{1}{x+2}\right) : \left(1 + \frac{3}{x^2 - 4}\right)$$

$$\frac{x^2 - x - 2}{x - 1}$$

$$13. \frac{\frac{1}{m} + \frac{1}{n}}{\frac{1}{m} - \frac{1}{n}}$$

$$\frac{m+n}{n-m}$$

$$14. \frac{\left(a - \frac{ab}{a+b}\right)}{\left(a + \frac{ab}{a-b}\right)} =$$

$$\frac{a-b}{a+b}$$

$$15. \frac{\frac{m^2}{n} - \frac{m^2 - n^2}{m+n}}{\frac{m-n}{n} + \frac{n}{m}} =$$

$$m$$

$$16. \frac{\frac{2}{1-a} + \frac{2}{1+a}}{\frac{2}{1+a} - \frac{2}{1-a}} =$$

$$\frac{-1}{a}$$

$$17. 1 - \frac{1}{2 + \frac{1}{\frac{x}{3} - 1}} =$$

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