

Bruchgleichungen - BG 3

Name _____ Datum _____

Löse jede Gleichung. Beachte, dass es mehrere Lösungen geben kann! (Verbindung mit quadratischen Gleichungen)

1)
$$\frac{p+1}{2p} - \frac{2}{p} = \frac{2}{p^2}$$

2)
$$\frac{v+2}{2v} + \frac{4v+4}{v} = \frac{v^2-6v+5}{v}$$

3)
$$\frac{1}{x^3} = \frac{1}{6x} - \frac{x^2-6x+5}{6x^3}$$

4)
$$\frac{4}{3n} + \frac{n^2+10n+24}{3n} = \frac{1}{n}$$

5)
$$\frac{x+1}{x} + \frac{2}{x} = \frac{5x^2+25x+30}{x^2}$$

6)
$$\frac{1}{2} = \frac{a^2+a-2}{6a} - \frac{1}{a}$$

7)
$$\frac{k-6}{4} = \frac{k+6}{4} - \frac{3k+6}{2k}$$

8)
$$\frac{r-6}{r^2} = \frac{r-6}{2r} + \frac{1}{2r}$$

9)
$$\frac{x-4}{6x^2} = \frac{1}{2x^2} + \frac{x-2}{x}$$

10)
$$\frac{1}{2} - \frac{x+6}{x^2} = \frac{x^2-5x+4}{2x^2}$$

11)
$$\frac{1}{n} = \frac{3n-3}{2n} + \frac{1}{n^2}$$

12)
$$\frac{b+1}{6b^2} + \frac{b+4}{3b} = \frac{1}{b^2}$$

13)
$$\frac{m^2+4m-5}{3m} - \frac{m+2}{m} = \frac{m+3}{3}$$

14)
$$\frac{5}{n} + \frac{n^2-5n+6}{n^2} = \frac{n^2+2n-8}{n^2}$$

15)
$$\frac{3}{n^2-n} - \frac{n+3}{n^2-n} = \frac{5n+20}{n-1}$$

16)
$$\frac{1}{b^2-b} = \frac{3b+12}{b^2} - \frac{b-6}{b^3-b^2}$$

17)
$$\frac{1}{n-5} + \frac{1}{n^2-11n+30} = \frac{6n+12}{n-6}$$

18)
$$\frac{2}{x-5} = \frac{6}{x^2-5x} + \frac{x^2-6x+9}{3x^2-15x}$$

19)
$$\frac{2}{r-6} = \frac{1}{r^3-4r^2-12r} + \frac{r-2}{r^2+2r}$$

20)
$$\frac{p+1}{p+3} + \frac{4p}{p^2+6p+9} = \frac{1}{p+3}$$

21)
$$\frac{1}{m+3} + \frac{m+6}{2m-6} = \frac{3m}{2m^2-18}$$

22)
$$\frac{1}{4x^2+25x+25} - \frac{2x-4}{4x^2+25x+25} = \frac{3x}{x+5}$$