Intermediate Algebra Skill

Adding or Subtracting Rational Expressions with Like Denominators

Simplify each expression.

1) $\dfrac{u-6v}{24uv^3} - \dfrac{u-5v}{24uv^3}$

2) $\dfrac{4x+5y}{15x} - \dfrac{x+5y}{15x}$

3) $\dfrac{x+4y}{18y^2x^2} - \dfrac{x+3y}{18y^2x^2}$

4) $\dfrac{u+5v}{24uv} - \dfrac{u+3v}{24uv}$

5) $\dfrac{x+1}{9x+36} - \dfrac{x-2}{9x+36}$

6) $\dfrac{2r+2}{6r^2+r-12} + \dfrac{r-6}{6r^2+r-12}$

7) $\dfrac{b-1}{12b^2+8b} + \dfrac{b+5}{12b^2+8b}$

8) $\dfrac{2n-4}{27n^2-54n} + \dfrac{n-2}{27n^2-54n}$

9) $\dfrac{3b-5}{2b^2-15b+18} - \dfrac{b-2}{2b^2-15b+18}$

10) $\dfrac{n+4}{6n^3+24n^2} + \dfrac{n+4}{6n^3+24n^2}$

11) $\dfrac{a-5}{2a^2+a-15} + \dfrac{a}{2a^2+a-15}$

12) $\dfrac{6v}{4v^4-16v^3} - \dfrac{3v+12}{4v^4-16v^3}$

13) $\dfrac{4x+4}{x^2-2x-8} - \dfrac{3x+2}{x^2-2x-8}$

14) $\dfrac{3v-4}{2v^2+8v+6} - \dfrac{2v-7}{2v^2+8v+6}$

15) $\dfrac{4x+5}{36x^2+24x-12} - \dfrac{40x-7}{36x^2+24x-12}$

16) $\dfrac{5n-6}{n^2-10n+24} - \dfrac{6n-10}{n^2-10n+24}$

Answers to Adding or Subtracting Rational Expressions with Like Denominators

1) $-\dfrac{1}{24uv^2}$

2) $\dfrac{1}{5}$

3) $\dfrac{1}{18\,yx^2}$

4) $\dfrac{1}{12u}$

5) $\dfrac{1}{3x+12}$

6) $\dfrac{1}{2r+3}$

7) $\dfrac{b+2}{6b^2+4b}$

8) $\dfrac{1}{9n}$

9) $\dfrac{1}{b-6}$

10) $\dfrac{1}{3n^2}$

11) $\dfrac{1}{a+3}$

12) $\dfrac{3}{4v^3}$

13) $\dfrac{1}{x-4}$

14) $\dfrac{1}{2v+2}$

15) $-\dfrac{1}{x+1}$

16) $\dfrac{1}{6-n}$