Example # 1 → Find the sum or difference.

1) $\frac{2}{5x} + \frac{3}{5x}$

$\frac{2+3}{5x}$

$\frac{5}{5x}$

$\frac{1}{x}$

2) $\frac{b}{b-3} + \frac{b+1}{b-3}$

$\frac{b+b+1}{b-3}$

$\frac{2b+1}{b-3}$

3) $\frac{c+9}{7c^2} - \frac{c-6}{7c^2}$

$\frac{c+9-(c-6)}{7c^2}$

$\frac{15}{7c^2}$

Example # 2 → Find the LCD of the rational expressions.

4) $\frac{3}{15v^2}, \frac{v^2-4}{20v^3}$

$3 \cdot 5 \cdot v \cdot v$

$2 \cdot 2 \cdot 5 \cdot v \cdot v \cdot v$

$5vv \cdot 3 \cdot 2 \cdot 2 \cdot v$

$60v^3$

5) $\frac{x-1}{x+2}, \frac{x+2}{x-1}$

$(x+2)$

$(x-1)$

$(x+2)(x-1)$

6) $\frac{m+9}{m^2+5m}, \frac{-3}{m^2+7m+10}$

$m(m+5)$

$(m+5)(m+2)$

$(m+5)(m+2)m$

Example # 3 → Find the sum or difference.

7) $11\left(\frac{13}{3y}\right) + \left(\frac{2}{11y}\right)3$

$\frac{143}{33y} + \frac{6}{33y}$

$\frac{149}{33y}$

8) $5x^3\left(\frac{3}{2x}\right) - \left(\frac{7}{5x^4}\right)2$

$\frac{15x^3}{10x^4} - \frac{14}{10x^4}$

$\frac{15x^3-14}{10x^4}$

Continue to Find the sum or difference.

9) $\frac{3x}{x^2-4x} + \left(\frac{x+5}{x-4}\right)\frac{x}{x}$

$\frac{x(x-4)}{\frac{3x}{x(x-4)} + \frac{x^2+5x}{x(x-4)}}$

$\frac{x^2+8x}{x(x-4)}$

$\frac{x(x+8)}{x(x-4)}$

$\frac{x+8}{x-4}$

10) $\left(\frac{1}{g^2+5g+6}\right) - \left(\frac{1}{g^2-4}\right)(g+3)$

$\frac{(g+2)(g+3)}{(g-2)(g+2)(g+3)}$

$\frac{(g+2)(g+3)(g-2)}{}$

$\frac{g-2}{(g+2)(g+3)(g-2)} - \frac{g+3}{(g+2)(g+3)(g-2)}$

$\frac{-5}{(g+2)(g+3)(g-2)}$