

Section 6.4 Focus Exercises

1. Add; simplify your result, if possible:

a) $\frac{2y}{7y} + \frac{5}{7y}$

b) $\frac{2x+5}{3x} + \frac{4x-6}{3x}$

c) $\frac{3p}{p+5} + \frac{15}{p+5}$

d) $\frac{3w+1}{2w+4} + \frac{w+7}{2w+4}$

e) $\frac{2x-6}{x^2-4x} + \frac{x-6}{x^2-4x}$

f) $\frac{4m+3}{m^2-25} + \frac{7-2m}{m^2-25}$

g) $\frac{2x+5}{x^2+x-6} + \frac{x+4}{x^2+x-6}$

h) $\frac{y^2-3y}{y^2-3y-28} + \frac{y^2+11y}{y^2-3y-28}$

i) $\frac{2v^2+7v-6}{v^2-16} + \frac{v^2+5v+6}{v^2-16}$

j) $\frac{2x^2+12}{x^2-2x-8} + \frac{8x-x^2}{x^2-2x-8}$

2. Subtract; simplify your result, if possible:

a) $\frac{y+6}{y-5} - \frac{1}{y-5}$

b) $\frac{2x+3}{2x+4} - \frac{x+1}{2x+4}$

c) $\frac{w^2}{w-3} - \frac{9}{w-3}$

d) $\frac{3a+5}{a^2-4} - \frac{a+1}{a^2-4}$

e) $\frac{4c+1}{c^2-3c} - \frac{3c+4}{c^2-3c}$

f) $\frac{x^2+6}{x^2-25} - \frac{5x+6}{x^2-25}$

g) $\frac{x^2+x}{x^2-11x+18} - \frac{6x+36}{x^2-11x+18}$

h) $\frac{y^2+3y}{y^2+2y-24} - \frac{4y+12}{y^2+2y-24}$

3. Rewrite each of these so that the negative is no longer in the denominator. Simplify.

a) $\frac{8}{-9y}$

b) $\frac{4p}{-(3p+1)}$

c) $\frac{-5x}{-(2x-7)}$

d) $\frac{x-4}{-(x-1)}$

e) $\frac{3-w}{-(w+6)}$

f) $\frac{-3x-1}{-(2x+1)}$

4. Add or subtract, as indicated. First, move any negative from the denominator into the numerator. Simplify if possible.

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

b) $\frac{1}{-3m} + \frac{4}{3m}$

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

d) $\frac{4x}{x+3} + \frac{3}{-(x+3)}$

e) $\frac{x+1}{-(x-5)} + \frac{4x-3}{x-5}$

f) $\frac{-5y}{-2y} - \frac{7}{2y}$

g) $\frac{x}{-5x} - \frac{-2}{5x}$

h) $\frac{c+1}{-(c-3)} - \frac{2}{c-3}$

i) $\frac{y-1}{y+4} - \frac{y+9}{-(y+4)}$