

## 10.4 Adding/Subtracting Rational Expressions

Date \_\_\_\_\_ Period \_\_\_\_\_

Simplify each expression.

$$1) \frac{4m}{2m^2 + 6m - 20} - \frac{m + 2}{2m^2 + 6m - 20}$$

$$\frac{3m - 2}{2m^2 + 6m - 20}$$

$$2) \frac{n - 2}{2n^2 + 4n - 16} - \frac{4n - 4}{2n^2 + 4n - 16}$$

$$\frac{-3n + 2}{2n^2 + 4n - 16}$$

$$3) \frac{m - 2}{2m^2 - 11m + 5} + \frac{m + 4}{2m^2 - 11m + 5}$$

$$\frac{2m + 2}{2m^2 - 11m + 5}$$

$$4) \frac{5}{n^2 - 7n + 6} + \frac{n + 5}{n^2 - 7n + 6}$$

$$\frac{10 + n}{n^2 - 7n + 6}$$

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

$$\frac{17x - 20}{3(2x - 5)}$$

$$6) \frac{6v}{2} + \frac{5v}{2v(v + 3)}$$

$$\frac{6v^2 + 18v + 5}{2(v + 3)}$$

$$7) \frac{6}{2(5x - 1)} - \frac{2x}{3}$$

$$\frac{9 - 10x^2 + 2x}{3(5x - 1)}$$

$$8) \frac{2}{m - 3} + \frac{m + 3}{m - 1}$$

$$\frac{2m - 11 + m^2}{(m - 3)(m - 1)}$$

$$9) \frac{3p}{3p(p - 5)} + \frac{3}{2p}$$

$$\frac{5p - 15}{2p(p - 5)}$$

$$10) \frac{3}{m + 4} - \frac{3m}{m - 6}$$

$$\frac{-9m - 18 - 3m^2}{(m - 6)(m + 4)}$$

$$11) \frac{2n-3}{5} - \frac{n+1}{n+5}$$

$$\frac{2n^2 + 2n - 20}{5(n+5)}$$

$$12) \frac{4x}{4} + \frac{x+3}{x-6}$$

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

$$13) \frac{3a+1}{2a+5} + \frac{6a}{4}$$

$$\frac{21a + 2 + 6a^2}{2(2a+5)}$$

$$14) \frac{2x}{x+2} + \frac{6}{x-3}$$

$$\frac{2x^2 + 12}{(x-3)(x+2)}$$

$$15) \frac{6}{x+1} + \frac{5x}{x-2}$$

$$\frac{5x^2 + 11x - 12}{(x-2)(x+1)}$$

$$16) \frac{6m}{5m+4} - \frac{4}{m-2}$$

$$\frac{6m^2 - 32m - 16}{(m-2)(5m+4)}$$

$$17) \frac{2}{3} + \frac{4p}{6p(p+2)}$$

$$\frac{2p+6}{3(p+2)}$$

$$18) \frac{6x}{5x} + \frac{x-2}{5x+4}$$

$$\frac{35x+14}{5(5x+4)}$$

$$19) \frac{4}{2} - \frac{2}{2v(3v+1)}$$

$$\frac{6v^2 + 2v - 1}{v(3v+1)}$$

$$20) \frac{m+3}{3(m-2)} - \frac{4}{2}$$

$$\frac{-5m+15}{3(m-2)}$$