

Problems

$$4.11) \quad \frac{2}{r} + \frac{3}{s} = \frac{2s}{rs} + \frac{3r}{rs} = \frac{2s + 3r}{rs}$$

$$4.12) \quad \frac{5y}{6x^2} - \frac{4}{3xy} = \frac{5y^2}{6x^2y} - \frac{8x}{6x^2y}$$
$$= \frac{5y^2 - 8x}{6x^2y}$$

4.13)

$$\frac{2a^3}{a^3b} + \frac{3b}{a-1} - \frac{3b-3}{6ab-6a}$$

$$\frac{2}{b} + \frac{3b}{a-1} - \frac{3(b-1)}{6a(b-1)}$$

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

$$\frac{4a(a-1)}{2ab(a-1)} + \frac{6ab^2}{2ab(a-1)} - \frac{b(a-1)}{2ab(a-1)}$$

$$\frac{4a^2 - 4a + 6ab^2 - ab + b}{2ab(a-1)} = \frac{4a^2 + 6ab^2 - 4a - ab + b}{2ab(a-1)}$$

Exercises

4.4.1)

$$\frac{-4}{x} + \frac{7}{y} = \frac{-4y}{xy} + \frac{7x}{xy} = \frac{7x - 4y}{xy}$$

4.4.2)

$$\frac{2y}{4x^2} - \frac{6-y}{5x} = \frac{2y}{9x^2} - \frac{3x(6-y)}{9x^2}$$

$$= \frac{2y - 18x + 3xy}{9x^2}$$

4.4.3)

$$\frac{2+a}{6ab^2} + \frac{a-b}{9a^2b} = \frac{3a(2+a)}{18a^2b^2} + \frac{2b(a-b)}{18a^2b^2}$$

$$= \frac{6a + 3a^2 + 18b - 2b^2}{18a^2b^2}$$

$$= \frac{3a^2 + 6a - 2b^2 + 18b}{18a^2b^2}$$

4.4.4)

$$\frac{8r - 8s}{2r^2 - 2rs} + \frac{3r^2}{rs - r}$$

$$\frac{8(\cancel{r} - s)}{2r(\cancel{r} - s)} + \frac{3r^2}{r(s-1)} = \frac{4}{r} + \frac{3r}{s-1}$$

$$= \frac{4(s-1)}{r(s-1)} + \frac{3r^2}{r(s-1)}$$

$$= \frac{3r^2 + 4s - 4}{r(s-1)}$$