

Addition et Multiplication

$$\textcircled{1} \quad \frac{3}{4} \left(\frac{3}{4} - \frac{4}{6} \right) = \frac{3}{4} \cdot \frac{3}{4} - \frac{3}{4} \cdot \frac{4}{6} = \frac{9}{16} - \frac{1}{2} = \frac{9 \cdot (2) - (1) (16)}{16 \cdot 2} = \frac{2}{16 \cdot 2} = \frac{1}{16}$$

$$\textcircled{2} \quad -1 + \frac{1}{2} + \frac{6}{3} = -1 + \frac{1}{3} + 2 = -1 + 2 + \frac{1}{3} = \frac{1}{1} + \frac{1}{3} = \frac{1 \cdot 3 + 1 \cdot 1}{3 \cdot 1} = \frac{4}{3}$$

$$\textcircled{3} \quad \frac{\frac{2}{1}}{\frac{1}{2}} - \frac{\frac{2}{5}}{2} = \frac{\frac{2}{1}}{\frac{1}{2}} - \frac{\frac{2}{5}}{\frac{2}{1}} = \frac{2}{1} \times \frac{2}{1} - \frac{2}{5} \times \frac{1}{2} = \frac{4}{1} - \frac{1}{5} = \frac{20-1}{5 \cdot 1} = \frac{19}{5}$$

$$\textcircled{4} \quad \frac{\frac{2}{3} + \frac{1}{2}}{\frac{3}{2} + \frac{2}{1}} = \frac{\frac{2(2) + 3(1)}{3 \cdot 2}}{\frac{3 \cdot 1 + 2(2)}{2 \cdot 1}} = \frac{\frac{7}{6}}{\frac{7}{2}} = \frac{7}{6} \times \frac{2}{7} = \frac{2}{2 \cdot 3} = \frac{1}{3}$$

$$\textcircled{5} \quad \sqrt{2} (\sqrt{2} + 6\sqrt{4}) = (\sqrt{2})^2 + 6 \cdot \sqrt{2} \cdot \sqrt{4} = 2 + 6 \times \sqrt{2} \times 2 = 2 + 12\sqrt{2}$$

$$a(b+c) = a \cdot b + a \cdot c$$

$$\frac{a}{b} \cdot \frac{c}{d} = \frac{a \cdot c}{b \cdot d}$$

$$\frac{a}{b} \pm \frac{c}{d} = \frac{d \cdot d \pm b \cdot c}{b \cdot d}$$

$$a+b = b+a$$

$$(a+b)+c = a+(b+c)$$

$$a(bc) = (ab) \cdot c$$

$$a \cdot b = b \cdot a$$

$$\frac{\frac{a}{b}}{\frac{c}{d}} = \frac{a}{b} \times \frac{d}{c}$$

$$(\sqrt{a})^2 = a$$