

I ♥ Rationals

name: KEY

Simplify each rational expression.

$$1. \frac{16}{18} = \frac{8}{9}$$

$$2. \frac{\frac{2}{3}}{\frac{4}{5}} = \frac{2}{3} \times \frac{5}{4} = \frac{10}{12} = \frac{5}{6}$$

$$3. \frac{4}{7} + \frac{2}{3} = \frac{12}{21} + \frac{14}{21} = \frac{26}{21}$$

$$4. \frac{3}{4} - \frac{1}{3} = \frac{9}{12} - \frac{4}{12} = \frac{5}{12}$$

$$5. \quad 6 + 4 \times \frac{2}{3} - \frac{1}{4} \times 3$$

$$= 6 + \frac{3 \times 2}{3 \times 3} + \frac{1 \times 5}{3 \times 5}$$

$$= 6 + \frac{8}{12} - \frac{3}{12}$$

$$= 6 + \frac{5}{12} \div \frac{11}{15}$$

$$= 6 + \frac{5}{12} \times \frac{15}{11}$$

$$= 6 + \frac{75}{132}$$

$$= \frac{6}{1} + \frac{75 \div 3}{132 \div 3}$$

$$= \frac{6}{1} + \frac{25}{44}$$

$$= \frac{264}{44} + \frac{25}{44} = \frac{289}{44}$$

$$= \frac{264}{44} + \frac{25}{44} = \frac{289}{44}$$

$$6. \quad 1 + \frac{1}{1 + \frac{1}{1}}$$

$$= 1 + \frac{1}{1+1}$$

$$= 1 + \frac{1}{2}$$

$$= \frac{2}{2} + \frac{1}{2}$$

$$= \frac{3}{2}$$