

1. Add or subtract the following fractions.

a. $\frac{2}{15} + \frac{9}{10}$

b. $\frac{5}{9} - \frac{1}{27}$

c. $\frac{13}{16} - \frac{5}{6}$

2. Add or subtract the rational expressions to a single rational expression and then simplify. If applicable, state any changes to the domain.

a. $\frac{6x}{x+2} + \frac{12}{x+2}$

c. $\frac{3x}{2} + \frac{x}{10}$

b. $\frac{6}{r^2 - 13r + 40} - \frac{r - 2}{r^2 - 13r + 40}$

d. $\frac{1}{y+6} + \frac{4}{y-3}$

e. $\frac{1}{t-2} - \frac{4}{t^2-4}$

h. $-\frac{12y}{y^2-y-2} + \frac{4y}{y-2}$

f. $\frac{3}{y+6} - \frac{6y}{y^2-36}$

i. $\frac{r^2+8}{r^2-4r} - \frac{r-2}{r}$

g. $\frac{t}{t-7} - \frac{t+42}{t^2-7t}$

j. $\frac{6x}{x+2} + \frac{x}{x-2} - 7$

$$\text{k. } \frac{4}{t+1} + 5$$

$$\text{n. } -\frac{5t}{4y^2} + \frac{5}{3ty}$$

$$\text{l. } -\frac{18y}{y^2 + 4y - 5} - \frac{3y}{y + 5}$$

$$\text{o. } \frac{2}{xr - 2} - \frac{4xr}{x^2r^2 - 4}$$

$$\text{m. } \frac{64y^2}{8y + 3t} - \frac{9t^2}{8y + 3t}$$

$$\text{p. } \frac{2xt}{x^2 + 9xt + 20t^2} - \frac{2x}{x + 4t}$$