

Name:

Date: Score:

Rational Expressions : Addition and Subtraction

1 $\frac{2z}{z-1} - \frac{3z}{z+1}$

2 $\frac{4x}{x^2-1} - \frac{2}{x} - \frac{2}{x+1}$

3 $3 + \frac{t}{t+2} - \frac{2}{t^2-4}$

4 $\frac{4}{y+1} + \frac{y+2}{y^2-1} + \frac{3}{y-1}$

5 $\frac{p+6}{5p+10} - \frac{p-2}{4p+8}$

6 $2 + \frac{x-3}{x+1}$

7 $\frac{5ab}{a^2-b^2} - \frac{a-b}{a+b}$

8 $\frac{7x+4}{x^2+3x+2} + \frac{3x-2}{x^2+3x+2}$

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Answers

1 $\frac{2z}{z-1} - \frac{3z}{z+1}$

$$\frac{-z^2 + 5z}{z^2 - 1}$$

2 $\frac{4x}{x^2-1} - \frac{2}{x} - \frac{2}{x+1}$

$$\frac{2}{x^2 - x}$$

3 $3 + \frac{t}{t+2} - \frac{2}{t^2-4}$

$$\frac{4t^2 - 2t - 14}{(t+2)(t-2)}$$

4 $\frac{4}{y+1} + \frac{y+2}{y^2-1} + \frac{3}{y-1}$

$$\frac{6y - 3}{(y+1)(y-1)}$$

5 $\frac{p+6}{5p+10} - \frac{p-2}{4p+8}$

$$\frac{-p + 34}{20(p+2)}$$

6 $2 + \frac{x-3}{x+1}$

$$\frac{3x - 1}{x + 1}$$

7 $\frac{5ab}{a^2-b^2} - \frac{a-b}{a+b}$

$$\frac{-a^2 + 7ab - b^2}{(a-b)(a+b)}$$

8 $\frac{7x+4}{x^2+3x+2} + \frac{3x-2}{x^2+3x+2}$

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