

Name:

Date: Score:

Rational Expressions : Adding and Subtracting

With Like Denominators

① $\frac{4x + 4}{x^2 - 2x - 8} - \frac{3x + 2}{x^2 - 2x - 8}$

② $\frac{2x^2 + 3}{x^2 - 6x + 5} - \frac{x^2 - 5x + 9}{x^2 - 6x + 5}$

③ $\frac{3v - 4}{2v^2 + 8v + 6} - \frac{2v - 7}{2v^2 + 8v + 6}$

④ $\frac{3k - 2}{3k^2 - 19k + 6} + \frac{1}{3k^2 - 19k + 6}$

With Unlike Denominators

⑤ $\frac{4xy}{x^2 - y^2} + \frac{x - y}{x + y}$

⑥ $\frac{2}{a^2 - 5a + 4} + \frac{-2}{a^2 - 4}$

⑦ $2 + \frac{x - 3}{x + 1}$

⑧ $\frac{4x}{x^2 - 2x - 3} - \frac{3}{x^2 - 5x + 6}$

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Answers

$$\textcircled{1} \quad \frac{4x+4}{x^2-2x-8} - \frac{3x+2}{x^2-2x-8}$$

$$\frac{1}{x-4}$$

$$\textcircled{2} \quad \frac{2x^2+3}{x^2-6x+5} - \frac{x^2-5x+9}{x^2-6x+5}$$

$$\frac{x+6}{x-5}$$

$$\textcircled{3} \quad \frac{3v-4}{2v^2+8v+6} - \frac{2v-7}{2v^2+8v+6}$$

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

$$\textcircled{4} \quad \frac{3k-2}{3k^2-19k+6} + \frac{1}{3k^2-19k+6}$$

$$\frac{1}{k-6}$$

$$\textcircled{5} \quad \frac{4xy}{x^2-y^2} + \frac{x-y}{x+y}$$

$$\frac{x+y}{x-y}$$

$$\textcircled{6} \quad \frac{2}{a^2-5a+4} + \frac{-2}{a^2-4}$$

$$\frac{10a-16}{(a^2-5a+4)(a^2-4)}$$

$$\textcircled{7} \quad 2 + \frac{x-3}{x+1}$$

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

$$\textcircled{8} \quad \frac{4x}{x^2-2x-3} - \frac{3}{x^2-5x+6}$$

$$\frac{4x+1}{(x+1)(x-2)}$$
