

Name:

Date: Score:

Adding and Subtracting Rational Expressions

Common Denominators

Simplify each expression

① $\frac{x + 4y}{18y^2x^3} + \frac{x + 3y}{18y^2x^3}$

② $\frac{x + 1}{12x^2 + 30x} + \frac{5x + 4}{12x^2 + 30x}$

③ $\frac{x + 2}{2x^2 + 13x + 20} - \frac{x + 3}{2x^2 + 13x + 20}$

④ $\frac{5}{p^2 - 6p + 9} + \frac{4}{p^2 - 6p + 9}$

⑤ $\frac{q + 5}{4q^2 + 20q} - \frac{q - 5}{4q^2 + 20q}$

⑥ $\frac{x - 1}{12x^2 + 8x} + \frac{x + 5}{12x^2 + 8x}$

⑦ $\frac{6n}{12n + 24} + \frac{n + 6}{12n + 24}$

⑧ $\frac{4x + 5y}{15x} - \frac{x + 5y}{15x}$

Name:

Date: Score:

Adding and Subtracting Rational Expressions

Common Denominators

Answers

$$\boxed{1} \quad \frac{x + 4y}{18y^2x^3} + \frac{x + 3y}{18y^2x^3}$$

$$\frac{2x + 7y}{18y^2x^3}$$

$$\boxed{2} \quad \frac{x + 1}{12x^2 + 30x} + \frac{5x + 4}{12x^2 + 30x}$$

$$\frac{6x + 5}{12x^2 + 30x}$$

$$\boxed{3} \quad \frac{x + 2}{2x^2 + 13x + 20} - \frac{x + 3}{2x^2 + 13x + 20}$$

$$-\frac{1}{2x^2 + 13x + 20}$$

$$\boxed{4} \quad \frac{5}{p^2 - 6p + 9} + \frac{4}{p^2 - 6p + 9}$$

$$\frac{9}{p^2 - 6p + 9}$$

$$\boxed{5} \quad \frac{q + 5}{4q^2 + 20q} - \frac{q - 5}{4q^2 + 20q}$$

$$\frac{5}{4q^2 + 20q}$$

$$\boxed{6} \quad \frac{x - 1}{12x^2 + 8x} + \frac{x + 5}{12x^2 + 8x}$$

$$\frac{x + 2}{6x^2 + 4x}$$

$$\boxed{7} \quad \frac{6n}{12n + 24} + \frac{n + 6}{12n + 24}$$

$$\frac{7n + 6}{12n + 24}$$

$$\boxed{8} \quad \frac{4x + 5y}{15x} - \frac{x + 5y}{15x}$$

$$\frac{1}{5}$$