

A.A.17: Addition and Subtraction of Rationals 4: Add or subtract fractional expressions with monomial or like binomial denominators

- 1 The expression $\frac{5x}{6} + \frac{x}{4}$ is equivalent to
- 2 The sum of $\frac{3}{x} + \frac{2}{5}$, $x \neq 0$, is
- 3 What is the sum of $\frac{2}{x}$ and $\frac{x}{2}$?
- 4 Which expression is equivalent to $\frac{a}{x} + \frac{b}{2x}$?
- 5 What is the sum of $\frac{3}{7n}$ and $\frac{7}{3n}$?
- 6 The reciprocal of the expression $\frac{2}{x} + \frac{3}{1}$ is
- 7 The expression $\frac{y}{x} - \frac{1}{2}$ is equivalent to
- 8 Expressed as a single fraction, $\frac{3}{4x} - \frac{2}{5x}$ is equal to
- 9 Expressed in simplest form, $\frac{x-7}{6} - \frac{3x-2}{12}$ is equivalent to
- 10 Express $\frac{1}{2x} - \frac{3}{14x}$ as a single fraction in lowest terms.
- 11 Expressed in simplest form, $\frac{5x+3}{x} - \frac{x-1}{2x}$ is
- 12 Which expression is equivalent to $\frac{x^3}{x+3} - \frac{9x}{x+3}$?

A.A.17: Addition and Subtraction of Rationals 4: Add or subtract fractional expressions with monomial or like binomial denominators

Answer Section

1 ANS:

$$\frac{13x}{12}$$

$$\frac{(5x \times 4) + (6 \times x)}{6 \times 4} = \frac{20x + 6x}{24} = \frac{26x}{24} = \frac{13x}{12}$$

REF: 060625a

2 ANS:

$$\frac{2x + 15}{5x}$$

$$\frac{(3 \times 5) + (x \times 2)}{(x)(5)} = \frac{15 + 2x}{5x} = \frac{2x + 15}{5x}$$

REF: 080207a

3 ANS:

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

$$\frac{(2 \times 2) + (x \times x)}{(x)(2)} = \frac{4 + x^2}{2x}$$

REF: 010423a

4 ANS:

$$\frac{2a + b}{2x}$$

$$\frac{(a \times 2x) + (x \times b)}{(x)(2x)} = \frac{2ax + bx}{2x^2} = \frac{x(2a + b)}{2x^2} = \frac{2a + b}{2x}$$

REF: 089911a

5 ANS:

$$\frac{58}{21n}$$

$$\frac{3}{7n} + \frac{7}{3n} = \frac{9n + 49n}{21n^2} = \frac{58n}{21n^2} = \frac{58}{21n}$$

REF: 060727a

6 ANS:

$$\frac{x}{2 + 3x}$$

REF: 060327siii

7 ANS:

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

$$\frac{(2 \times y) - (1 \times x)}{(x)(2)} = \frac{2y-x}{2x}$$

REF: 010016a

8 ANS:

$$\frac{7}{20x}$$

$$\frac{3}{4x} - \frac{2}{5x} = \frac{15x-8x}{20x^2} = \frac{7x}{20x^2} = \frac{7}{20x}$$

REF: 010921a

9 ANS:

$$\frac{-x-12}{12}$$

REF: 068927siii

10 ANS:

$$\frac{2}{7x}$$

REF: 068708siii

11 ANS:

$$\frac{9x+7}{2x}$$

REF: 010118siii

12 ANS:

$$x(x-3)$$

REF: 010218siii