Adding and subtracting algebraic fractions

1

Write $\frac{2}{x+3} + \frac{1}{5}$ as a single fraction.

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

$= \frac{\qquad}{5(x+3)}$

$= \frac{\qquad}{5(x+3)}$

Answer _____

2

Write $\frac{4}{x+1} + \frac{1}{2}$ as a single fraction.

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

$= \frac{\qquad}{\qquad}$

$= \frac{\qquad}{\qquad}$

Answer _____

3

Write $\frac{1}{x+2} + \frac{3}{4}$ as a single fraction.

$\frac{1 \times \boxed{\quad}}{(x+2) \times \boxed{\quad}} + \frac{3 \times \boxed{\quad}}{4 \times \boxed{\quad}}$

$= \frac{\qquad}{\qquad}$

$= \frac{\qquad}{\qquad}$

Answer _____

4

Write $\frac{5}{x+2} + \frac{1}{4}$ as a single fraction.

$\frac{5 \times \boxed{\quad}}{(x+2) \times \boxed{\quad}} + \frac{1 \times \boxed{\quad}}{4 \times \boxed{\quad}}$

$= \frac{\qquad}{\qquad}$

$= \frac{\qquad}{\qquad}$

Answer _____

5

Write $\frac{2}{x+1} + \frac{3}{x+4}$ as a single fraction.

$\frac{2 \times \boxed{(x+4)}}{(x+1) \times \boxed{(x+4)}} + \frac{3 \times \boxed{(x+1)}}{(x+4) \times \boxed{(x+1)}}$

$= \frac{\qquad}{(x+1)(x+4)}$

$= \frac{\qquad}{(x+1)(x+4)}$

Answer _____

6

Write $\frac{4}{x+2} + \frac{1}{x+3}$ as a single fraction.

$\frac{4 \times \boxed{(x+3)}}{(x+2) \times \boxed{(x+3)}} + \frac{1 \times \boxed{(x+2)}}{(x+3) \times \boxed{(x+2)}}$

$= \frac{\qquad}{\qquad}$

$= \frac{\qquad}{\qquad}$

Answer _____

7

Write $\frac{3}{x+1} - \frac{2}{x+5}$ as a single fraction.

$\frac{3 \times \boxed{\quad}}{(x+1) \times \boxed{\quad}} - \frac{2 \times \boxed{\quad}}{(x+5) \times \boxed{\quad}}$

$= \frac{\qquad}{\qquad}$

$= \frac{\qquad}{\qquad}$

Answer _____

8

Ali writes

$\frac{6}{x+2} - \frac{1}{x+3} = \frac{6x+18-x+2}{(x+2)(x+3)}$.

Explain the mistake. Write the right single fraction.

_____

_____

Answer _____

Adding and subtracting algebraic fractions *further practice*

9

Write $\frac{1}{x+3} + \frac{2}{7}$ as a single fraction.

_____

_____

Answer _____

10

Write $\frac{5}{x+1} + \frac{2}{x+3}$ as a single fraction.

_____

_____

Answer _____

11

Write $\frac{4}{x+2} - \frac{3}{x+5}$ as a single fraction.

_____

_____

Answer _____

12

Write $\frac{2}{x} + \frac{3}{x+1}$ as a single fraction.

_____

_____

Answer _____

13

A rectangle is $\frac{2}{x+1}$ cm long and $\frac{1}{x+2}$ cm wide. Write its perimeter as a single fraction.

_____

_____

Answer _____

14

Write $\frac{3}{x-1} + \frac{2}{x+2}$ as a single fraction.

_____

_____

Answer _____

15

$\frac{2}{x+1} + \frac{3}{x+2} = \frac{ax+b}{(x+1)(x+2)}$.

Find the values of a and b.

_____

_____

Answer _____

16

Kim says $\frac{1}{x+1} - \frac{1}{x+2}$ is negative for some positive values of x.

Is she right? Explain.

_____

_____

Answer _____