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Mixed Questions on Algebraic Fractions

Express as a single fraction in its simplest form:

1. $\frac{2}{x}+\frac{3}{(x+1)}$ **2.** $\frac{5}{x}-\frac{2}{(x+1)}$ **3.** $\frac{a^2}{6}\times\frac{3}{a}$ **4.** $\frac{y}{8}\div\frac{y}{2}$

5. $\frac{3}{x}+\frac{1}{(x+2)}$ **6.** $\frac{4}{x}-\frac{3}{(x+2)}$ **7.** $\frac{10}{k^2}\times\frac{k}{2}$ **8.** $\frac{x^2}{10}\div\frac{x}{5}$

9. $\frac{4}{x}+\frac{1}{(x-2)}$ **10.** $\frac{5}{x}-\frac{3}{(x+2)}$ **11.** $\frac{x^2}{6}\times\frac{2}{x}$ **12.** $\frac{m}{6}\div\frac{m^2}{4}$

13. $\frac{2}{x}+\frac{3}{(x-1)}$ **14.** $\frac{3}{x}-\frac{2}{(x-2)}$ **15.** $\frac{t^2}{4}\times\frac{8}{t^3}$ **16.** $\frac{a^2}{b^4}\div\frac{a}{b}$

17. $\frac{2}{(x+1)}+\frac{3}{(x+2)}$ **18.** $\frac{5}{(x-2)}-\frac{2}{(x+2)}$ **19.** $\frac{2x}{3}\times\frac{3}{4x}$ **20.** $\frac{n}{2}\div\frac{n^2}{10}$

21. $\frac{4}{(x-1)}+\frac{2}{(x+3)}$ **22.** $\frac{7}{(x+2)}-\frac{2}{x}$ **23.** $\frac{4x^2}{5y}\times\frac{y^2}{8x^2}$ **24.** $\frac{2ab}{3}\div\frac{4a}{b}$

Answers

1. $\frac{5x+2}{x(x+1)}$ **2.** $\frac{3x+5}{x(x+1)}$ **3.** $\frac{a}{2}$ **4.** $\frac{1}{4}$

5. $\frac{4x+6}{x(x+2)}$ **6.** $\frac{x+8}{x(x+2)}$ **7.** $\frac{5}{k}$ **8.** $\frac{x}{2}$

9. $\frac{5x-8}{x(x-2)}$ **10.** $\frac{2x+10}{x(x+2)}$ **11.** $\frac{x}{3}$ **12.** $\frac{2}{3m}$

13. $\frac{5x-2}{x(x-1)}$ **14.** $\frac{x-6}{x(x-2)}$ **15.** $\frac{2}{t}$ **16.** $\frac{a}{b^3}$

17. $\frac{5x+7}{(x+1)(x+2)}$ **18.** $\frac{3x+14}{(x-2)(x+2)}$ **19.** $\frac{1}{2}$ **20.** $\frac{5}{n}$

21. $\frac{6x+10}{(x-1)(x+3)}$ **22.** $\frac{5x-4}{x(x+2)}$ **23.** $\frac{y}{10}$ **24.** $\frac{b^2}{6}$