Multiplying and Dividing Algebraic Fractions *Fluency* ANSWERS

Simplify fully

1 $\frac{2x}{3} \times \frac{9}{x^2}$ $\frac{6}{x}$

2 $\frac{4}{x} \times \frac{x^2}{8}$ $\frac{x}{2}$

3 $\frac{5x^2}{6} \times \frac{3}{10x}$ $\frac{x}{4}$

4 $\frac{x}{4} \times \frac{12}{x^3}$ $\frac{3}{x^2}$

5 $\frac{7x}{2} \times \frac{4}{21x^2}$ $\frac{2}{3x}$

6 $\frac{3x^3}{5} \times \frac{10}{9x}$ $\frac{2x^2}{3}$

Simplify fully

7 $\frac{2x}{3} \div \frac{4x}{9}$ $\frac{3}{2}$

8 $\frac{6}{x} \div \frac{3}{x^2}$ $2x$

9 $\frac{x^2}{5} \div \frac{x}{15}$ $3x$

10 $\frac{8x}{3} \div \frac{2x^2}{5}$ $\frac{20}{3x}$

11 $\frac{9}{4x} \div \frac{3}{2x^2}$ $\frac{3x}{2}$

12 $\frac{5x^3}{2} \div \frac{15x}{4}$ $\frac{2x^2}{3}$

Simplify fully

13 $\frac{x^2-4}{x+3} \times \frac{x+3}{x-2}$ $x+2$

14 $\frac{x+1}{x} \times \frac{x^2}{x^2-1}$ $\frac{x}{x-1}$

15 $\frac{x^2+5x+6}{x+2} \times \frac{1}{x+3}$ 1

16 $\frac{3x+6}{x^2} \times \frac{x}{x+2}$ $\frac{3}{x}$

17 $\frac{x^2-9}{2x} \times \frac{4x}{x-3}$ $2(x+3)$

18 $\frac{x+4}{x-1} \times \frac{x^2-1}{x^2+4x}$ $\frac{x+1}{x}$

Simplify fully

19 $\frac{x^2-1}{x} \div \frac{x+1}{x^2}$ $x(x-1)$

20 $\frac{x+2}{x-3} \div \frac{x^2-4}{x-3}$ $\frac{1}{x-2}$

21 $\frac{x^2+3x}{x^2-9} \div \frac{x}{x-3}$ 1

22 $\frac{2x+4}{x^2-16} \div \frac{x+2}{x-4}$ $\frac{2}{x+4}$

23 $\frac{x^2-x-6}{x} \div \frac{x-3}{2x}$ $2(x+2)$

24 $\frac{x^2-25}{x^2+5x} \div \frac{x-5}{3}$ $\frac{3}{x}$

Simplify fully

25 $\frac{x^2-4}{x^2+x-6} \times \frac{x+3}{x}$ $\frac{x+2}{x}$

26 $\frac{2x^2+x}{x^2-1} \div \frac{2x+1}{x+1}$ $\frac{x}{x-1}$

27 $\frac{x^2-2x}{4} \times \frac{8}{x^2-4}$ $\frac{2x}{x+2}$

28 $\frac{x^2+6x+9}{x^2-9} \div \frac{x+3}{2}$ $\frac{2}{x-3}$

29 $\frac{3x-3}{x^2+2x} \times \frac{x^2-4}{x^2-x}$ $\frac{3(x-2)}{x^2}$

30 $\frac{x^2-16}{x^2+x} \div \frac{x^2-4x}{x+1}$ $\frac{x+4}{x^2}$