Simplifying Algebraic Fractions *Fluency* ANSWERS

Simplify fully

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

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

3 $\frac{10xy}{15y}$ $\frac{2x}{3}$

4 $\frac{12a^3}{8a}$ $\frac{3a^2}{2}$

5 $\frac{9x^2y}{3xy^2}$ $\frac{3x}{y}$

6 $\frac{14m}{21m^2}$ $\frac{2}{3m}$

Simplify fully

7 $\frac{3x+6}{3}$ $x+2$

8 $\frac{4x-8}{2x}$ $\frac{2(x-2)}{x}$

9 $\frac{x^2+5x}{x}$ $x+5$

10 $\frac{6x+9}{3x}$ $\frac{2x+3}{x}$

11 $\frac{5x-10}{x-2}$ 5

12 $\frac{x^2-3x}{2x-6}$ $\frac{x}{2}$

Simplify fully

13 $\frac{x^2+5x+6}{x+2}$ $x+3$

14 $\frac{x^2-9}{x+3}$ $x-3$

15 $\frac{x^2-4x}{x^2-16}$ $\frac{x}{x+4}$

16 $\frac{x+4}{x^2+6x+8}$ $\frac{1}{x+2}$

17 $\frac{x^2-x-12}{x^2-16}$ $\frac{x+3}{x+4}$

18 $\frac{x^2+7x+10}{x^2+4x-5}$ $\frac{x+2}{x-1}$

Simplify fully

19 $\frac{2x^2+7x+3}{x+3}$ $2x+1$

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

21 $\frac{3x^2-12}{x^2+x-6}$ $\frac{3(x+2)}{x+3}$

22 $\frac{2x^2+x-6}{x^2-4}$ $\frac{2x-3}{x-2}$

23 $\frac{6x^2+x-2}{4x^2-1}$ $\frac{3x+2}{2x+1}$

24 $\frac{9x^2-4}{3x^2+x-2}$ $\frac{3x+2}{x+1}$

Simplify fully

25 $\frac{x^2-9}{3-x}$ $-x-3$

26 $\frac{2x-2}{1-x}$ -2

27 $\frac{x^2+2xy+y^2}{x^2-y^2}$ $\frac{x+y}{x-y}$

28 $\frac{x^3-4x}{x^2+2x}$ $x-2$

29 $\frac{x^2-5x+6}{4-x^2}$ $\frac{3-x}{x+2}$

30 $\frac{8x^2-2}{4x^2+4x+1}$ $\frac{2(2x-1)}{2x+1}$