

Complex Fractions Worksheet

1. Simplify the following.

(a)
$$\frac{\frac{3n+6}{2n+2}}{\frac{n+2}{n^2-1}}$$

(b)
$$\frac{\frac{x^2-4}{x+3}}{\frac{4x-8}{3x+9}}$$

(c)
$$\frac{\frac{x^2+15x+56}{x^2-3x-54}}{\frac{x^2+6x-16}{x^2+4x-12}}$$

(d)
$$\frac{1+\frac{4}{9}}{1-\frac{2}{3}}$$

(e)
$$\frac{\frac{1}{x}+4}{\frac{1}{1}-2}$$

(f)
$$\frac{\frac{4}{x}+x}{\frac{x}{4}+x}$$

(g)
$$\frac{\frac{3}{y}+\frac{2}{3y}}{y+\frac{y}{3}}$$

(h)
$$\frac{1-\frac{1}{x}}{1-\frac{1}{x^2}}$$

(i)
$$\frac{\frac{3}{4x^3}-\frac{1}{2x}}{\frac{2x}{3}+\frac{1}{4x^3}}$$

(j)
$$\frac{\frac{a-4}{a^3}}{\frac{2}{a}-\frac{8}{a^2}}$$

Answers:

(a)
$$\frac{3(n-1)}{2}$$

(b)
$$\frac{3(x+2)}{4}$$

(c)
$$\frac{x+7}{x-9}$$

(d)
$$\frac{13}{3}$$

(e)
$$\frac{1+4x}{1-2x}$$

(f)
$$\frac{16+4x^2}{5x^2}$$

(g)
$$\frac{11}{4y^2}$$

(h)
$$\frac{x}{x+1}$$

(i)
$$\frac{3-2x^2}{6x^2+5}$$

(j)
$$\frac{1}{2a}$$