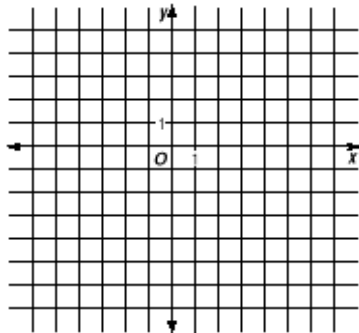


You must show all of your work to receive full credit.

1) Locate the asymptotes and graph the rational function.

$$f(x) = \frac{5}{x-4}$$



Perform the indicated operation and give the answer in completely reduced form.

$$2) \frac{m^2-1}{4m} \cdot \frac{9m}{m+1}$$

$$3) \frac{x-2}{3x-2y} \cdot \frac{9x^2-4y^2}{2x^2-x-6}$$

$$4) \frac{s^2+s}{s^2-7s+6} \div \frac{s+1}{s-1}$$

$$5) \frac{3x^2+17x+20}{3x^2-4x-15} \div \frac{x^2+5x+4}{4x^2-8x-12}$$

$$6) \frac{\frac{a^2+9a+20}{a^2-9a+20}}{\frac{a+4}{a-4}}$$

$$7) \frac{\frac{x^2-12x+36}{12x}}{\frac{x-6}{2x}}$$

$$8) \frac{9}{2x^2y^6} + \frac{1}{3x^3y^4}$$

$$9) \frac{x}{x-1} + \frac{2x+5}{x^2+2x-3}$$

$$10) \frac{x-1}{x^2-x-2} + \frac{x-4}{x^2-1}$$

$$11) \frac{3t}{t^2-36} - \frac{4}{t^2+8t+12}$$

$$12) \frac{x-1}{x^2-x-6} - \frac{x-1}{x^2-4}$$

Solve each equation.

$$13) \frac{p+3}{6p} = \frac{p+6}{6p-4}$$

$$14) \frac{x}{x+2} - \frac{x}{x-2} = \frac{x^2+4}{x^2-4}$$