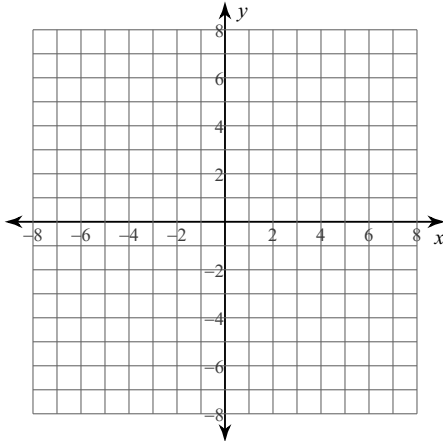


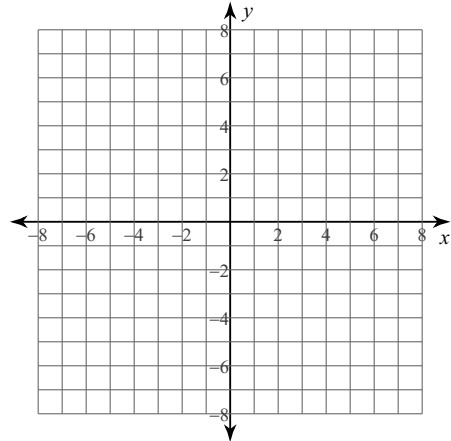
Chapter 7 Review WS1

Identify the domain and range of each. Then sketch the graph.

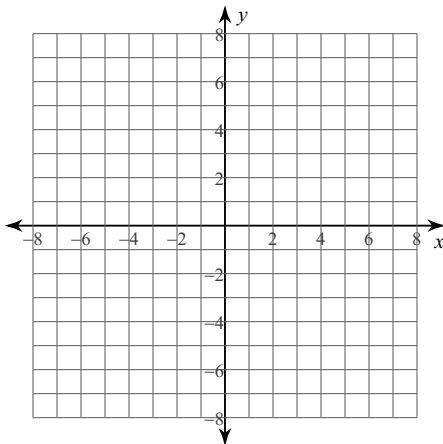
1) $f(x) = \frac{4}{x-2} - 1$



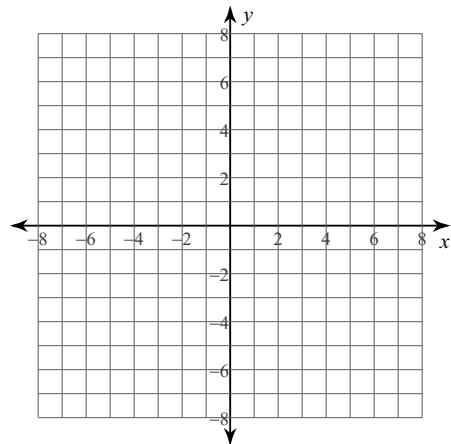
2) $f(x) = \frac{3}{x-1} + 1$



3) $f(x) = \frac{x-1}{3x+9}$



4) $f(x) = \frac{x-1}{2x-8}$



Simplify each and state the excluded values from the domain.

$$5) \frac{m+7}{2m^2+14m}$$

$$6) \frac{r-8}{3r^2-24r}$$

$$7) \frac{n^2+5n-36}{n^2+8n-9}$$

$$8) \frac{x^2-9}{x^2+x-6}$$

Simplify each and state the excluded values.

$$9) \frac{a-1}{10} \cdot \frac{2}{a^2-5a+4}$$

$$10) \frac{6-k}{k-8} \cdot \frac{3k-24}{k-6}$$

$$11) \frac{v^2-5v+6}{v-3} \cdot \frac{10}{v-2}$$

$$12) \frac{8b^3+40b^2}{b+2} \cdot \frac{b+3}{b^2+8b+15}$$

$$13) \frac{2x}{x-9} \div \frac{x+3}{x^2-6x-27}$$

$$14) \frac{1}{p+2} \div \frac{p-10}{p^2+10p+16}$$

Simplify each expression.

$$15) \frac{x+5}{27x^2+18x} - \frac{6}{27x^2+18x}$$

$$16) \frac{a+6}{9a^2-45a} + \frac{a-3}{9a^2-45a}$$

$$17) \frac{3}{x-2} - \frac{2x}{x-1}$$

$$18) \frac{3x}{x-3} + \frac{4}{x+2}$$

$$19) \frac{n-1}{3n^2+18n+27} + \frac{2}{3n}$$

$$20) \frac{4}{3m} - \frac{4m}{3m^2-15m+18}$$

$$21) \frac{\frac{x^2}{4} - \frac{4}{x}}{\frac{x}{2}}$$

$$22) \frac{\frac{1}{x} + \frac{3}{4}}{\frac{1}{3}}$$

Solve each equation. Remember to check for extraneous solutions.

$$23) \frac{1}{2p} = \frac{1}{p} + \frac{1}{2}$$

$$24) \frac{x+4}{x} + \frac{1}{5} = \frac{4}{5}$$

$$25) \frac{3}{k-4} = \frac{4}{k^2-6k+8} + \frac{1}{k-2}$$

$$26) \frac{1}{3n+18} + \frac{2}{3n^2+27n+54} = \frac{1}{n^2+9n+18}$$

$$27) \frac{8x-16}{x^2+2x-3} + \frac{4}{3x^2+9x} = \frac{4}{3x^3+6x^2-9x}$$

$$28) \frac{x+3}{x-6} = \frac{x+6}{x-5} + \frac{1}{x^2-11x+30}$$