

Graphing Rational Functions

Date _____ Period _____

1-4: Simplify each expression.

1) $\frac{x^2 + 17x + 72}{10x + 90}$

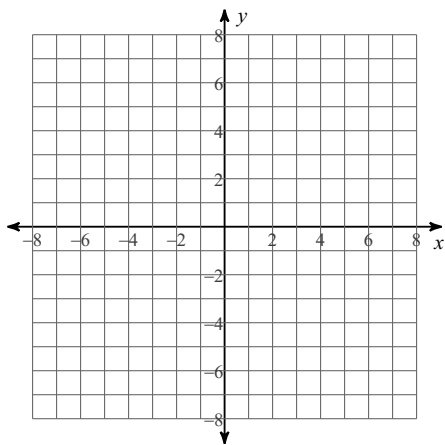
2) $\frac{1}{n-9} \cdot \frac{2n^3 - 18n^2}{5}$

3) $\frac{1}{7x-14} \div \frac{x+1}{6x^3+6x^2}$

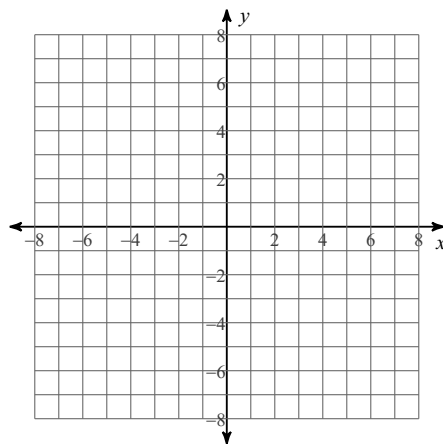
4) $\frac{6x}{2} + \frac{2x}{2y}$

5-10: Identify the vertical asymptotes, horizontal asymptote, domain, and range of each. Then sketch the graph.

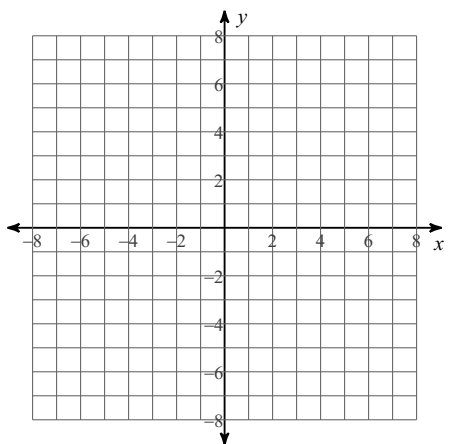
5) $f(x) = \frac{4}{x+2} + 1$



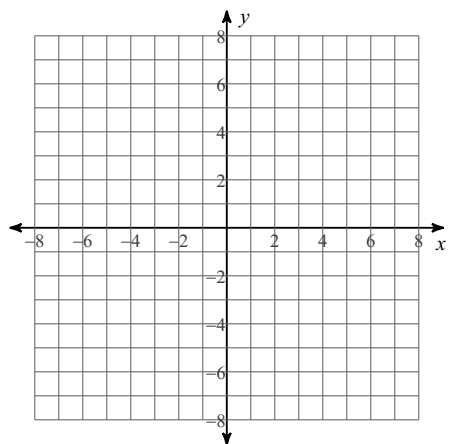
6) $f(x) = \frac{3}{x-1} + 1$



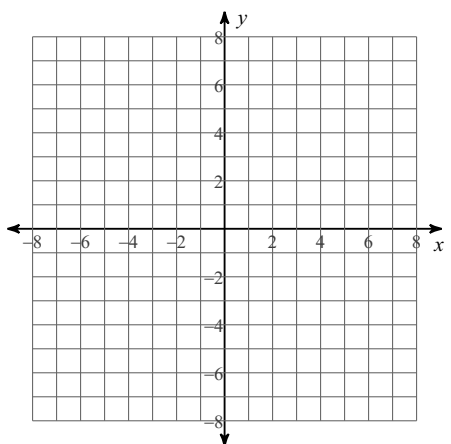
$$7) f(x) = \frac{2}{x} - 1$$



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



$$9) f(x) = \frac{-2x+6}{x-1}$$



$$10) f(x) = \frac{x-4}{2x-2}$$

