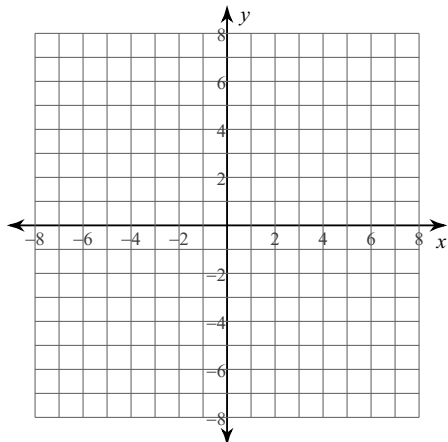


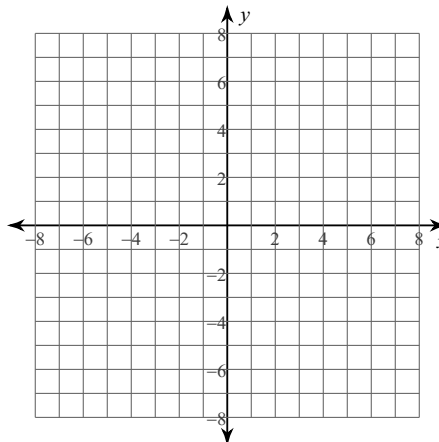
8.3 Worksheet

Identify the vertical asymptotes, horizontal asymptote, and domain of each. Then sketch the graph.

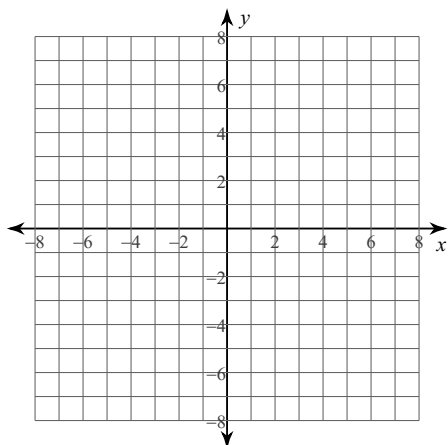
$$1) f(x) = \frac{3}{x^2 - 3x}$$



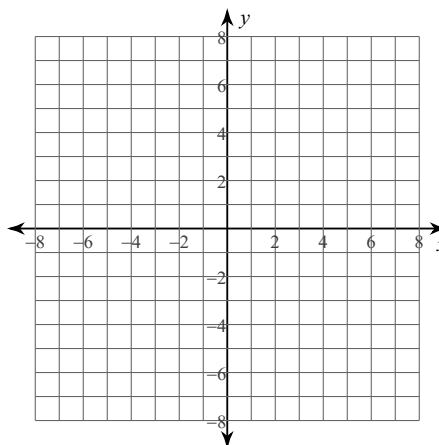
$$2) f(x) = \frac{x^2 + 3x}{-4x + 8}$$



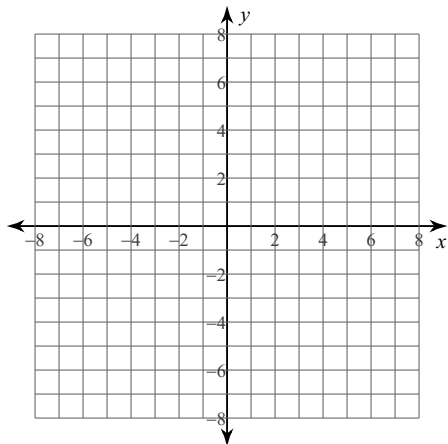
$$3) f(x) = \frac{x^2 - 16}{4x^2 - 8x - 12}$$



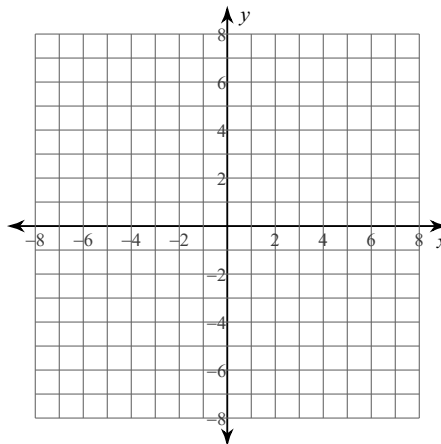
$$4) f(x) = \frac{x^2 + 3x}{-x^2 + x + 2}$$



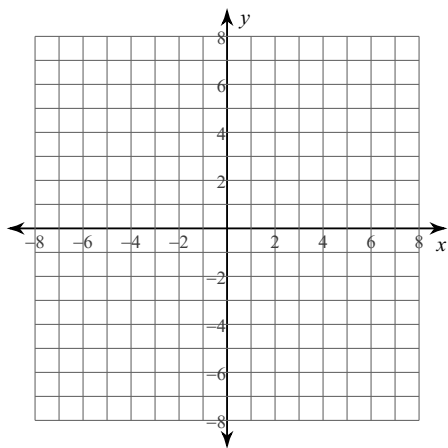
$$5) f(x) = \frac{2x^2 - 2x - 12}{x^2 + x - 2}$$



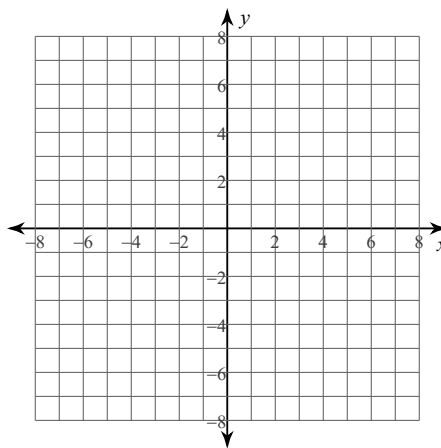
$$6) f(x) = \frac{-3x + 9}{x^2 - x - 6}$$



$$7) f(x) = \frac{x^2 - 9}{-2x}$$



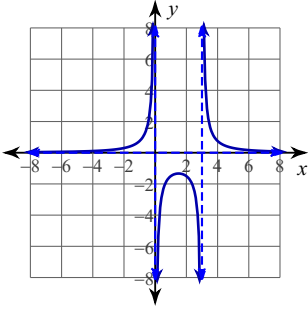
$$8) f(x) = \frac{x^3 + x^2 - 6x}{-3x^2 - 6x}$$



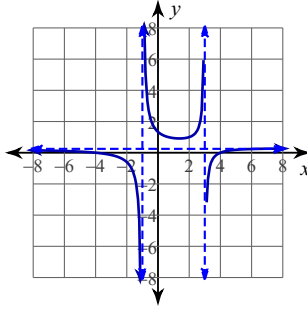
9) Write a rational function whose domain is all real numbers, except $x = 2$ and $x = 3$.

Answers to 8.3 Worksheet

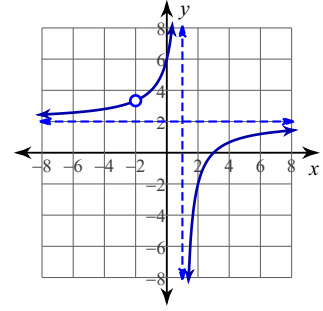
1)



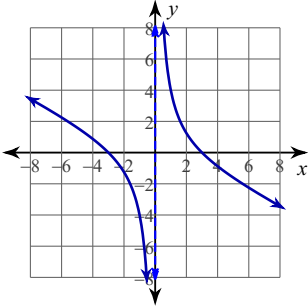
3)



5)



7)



9) anything with a denominator of $x^2 - 5x + 6$