

Graphing Rational Functions

Determine the equations of any vertical asymptotes and the values of x for any holes in the graph of each rational function.

1. $f(x) = \frac{3}{x^2 - 2x - 8}$

2. $f(x) = \frac{10}{x^2 - 13x + 36}$

3. $f(x) = \frac{x + 12}{x^2 + 10x - 24}$

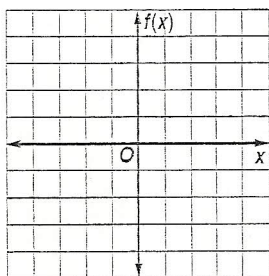
4. $f(x) = \frac{x - 1}{x^2 - 4x + 3}$

5. $f(x) = \frac{x^2 + 8x + 12}{x + 2}$

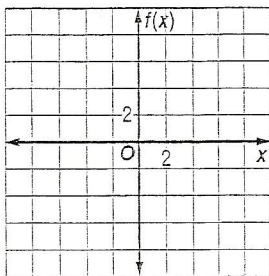
6. $f(x) = \frac{x^2 + x - 12}{x - 3}$

Graph each rational function.

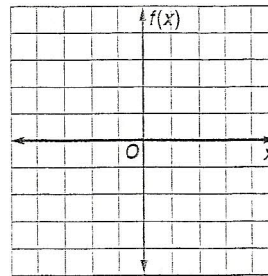
7. $f(x) = \frac{-3}{x}$



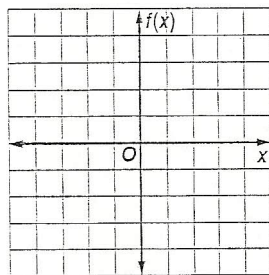
8. $f(x) = \frac{10}{x}$



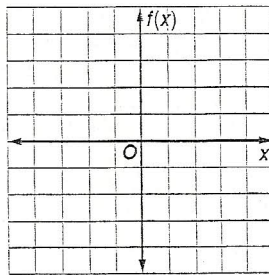
9. $f(x) = \frac{-4}{x}$



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



11. $f(x) = \frac{x}{x + 2}$



12. $f(x) = \frac{x^2 - 4}{x - 2}$

