

Rewrite each of the fractions below in its simplest form. Indicate what factors were used.

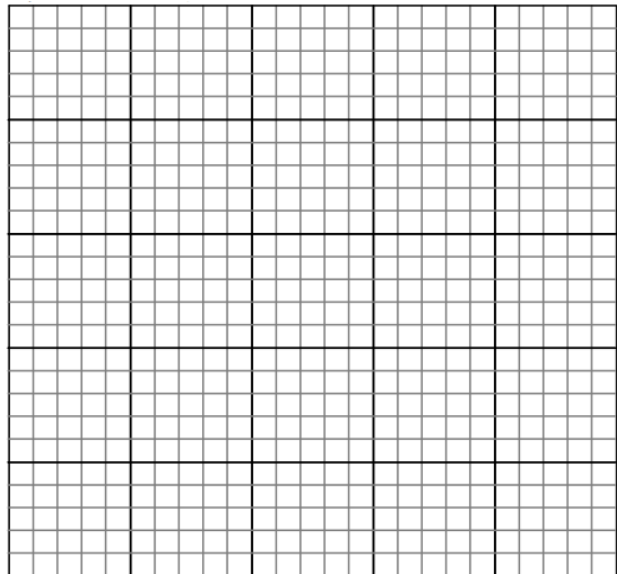
1. $\frac{35}{56}$

2. $\frac{35x^3}{15x^2}$

3. $\frac{x+1}{x^2-1}$

Graph the function and state the domain, range, and any asymptotes:

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



Find the zeros of the following polynomials:

5. $x^2 + 4x + 3 = 15$

6. $x^3 + 5x^2 + 6x = 0$

Explain the process of adding/subtracting fractions. Use the given problem as an example:

7. $\frac{4}{5} - \frac{1}{3}$

Explain the process of multiplying and dividing fractions. Use the given problems as examples:

8. $\frac{1}{6} \div \frac{2}{5}$

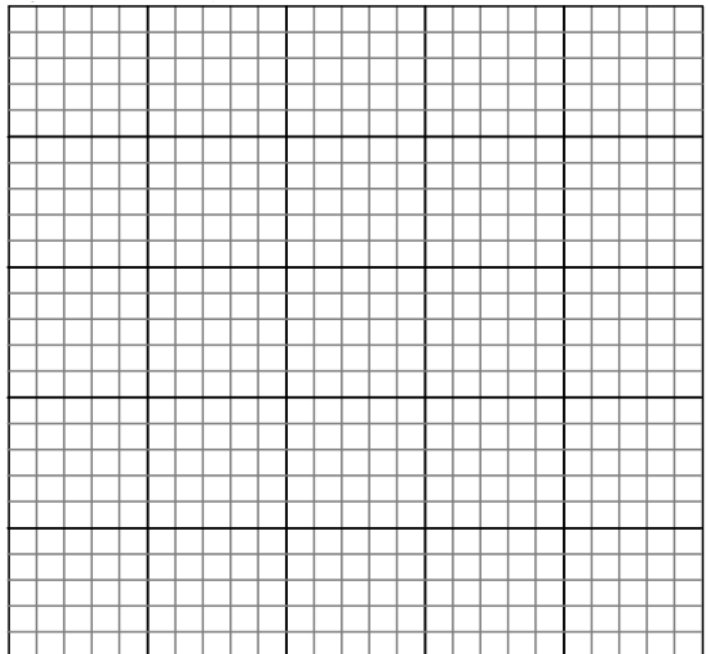
9. $\frac{3}{8} \cdot \frac{2}{5}$

Explain how the graph of $g(x)$ will differ from the graph of the parent function $f(x)$:

10. $g(x) = \frac{8}{x-3} + 5$ $f(x) = \frac{1}{x}$

Graph the function. Include any asymptotes.

11. $g(x) = \frac{3}{x+8} - 3$

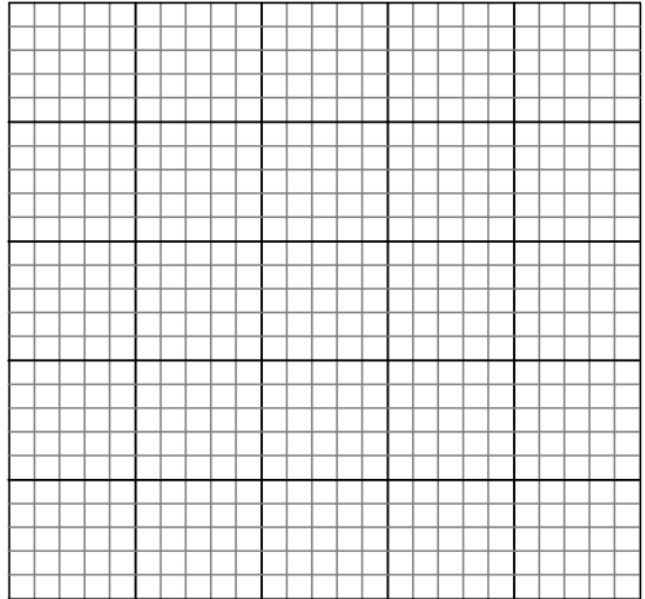


How do you find the horizontal and vertical asymptotes of the function $g(x)$

12. $g(x) = \frac{-5x + 2}{4x + 5}$

Graph the function. Include any asymptotes.

13. $g(x) = \frac{x + 4}{x - 3}$



Write and graph an equation that models this situation:

14. To join a rock climbing gym, you must pay an initial fee of \$100 and a monthly fee of \$59. Write and graph an equation that gives the average cost per month as a function of the number of months of membership. After how many months will the average cost fall below \$70?

