

Graphing Rational Functions Review

Graph the function with a solid line and the asymptotes with a dashed line.

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

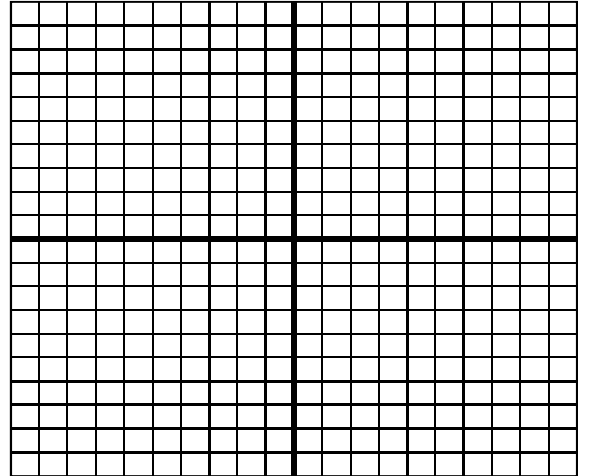
VA: _____

HA: _____

Hole _____

Domain: _____

Range: _____



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

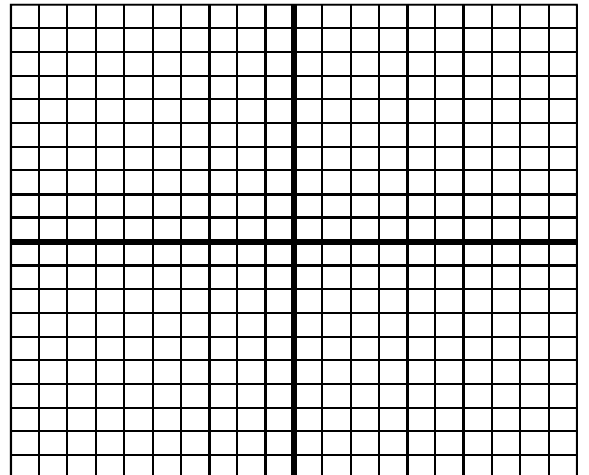
VA _____

HA _____

Hole _____

Domain _____

Range _____



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

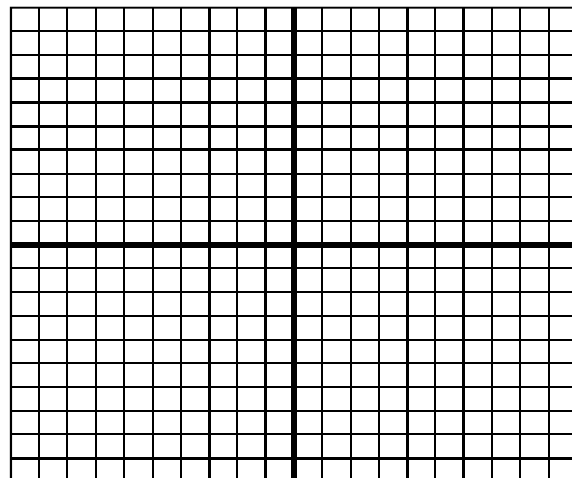
VA _____

HA _____

Holes _____

Domain _____

Range _____



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

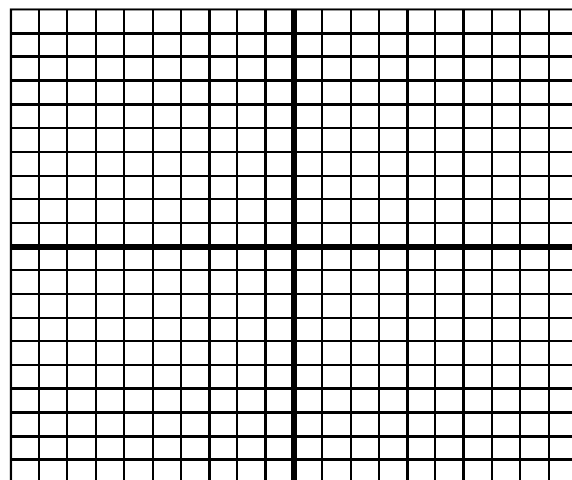
VA _____

HA _____

Hole _____

Domain _____

Range _____



5. $f(x) = \frac{x^2 - x - 6}{x^2 - 9}$

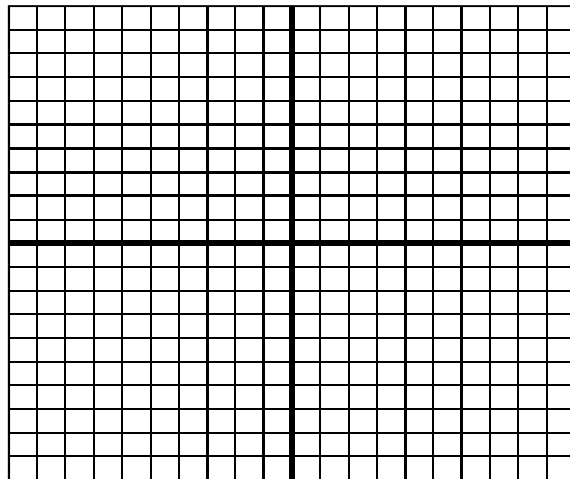
VA _____

HA _____

Hole _____

Domain _____

Range _____



6. $f(x) = \frac{x^2 - 4}{x^2 - 5x + 4}$

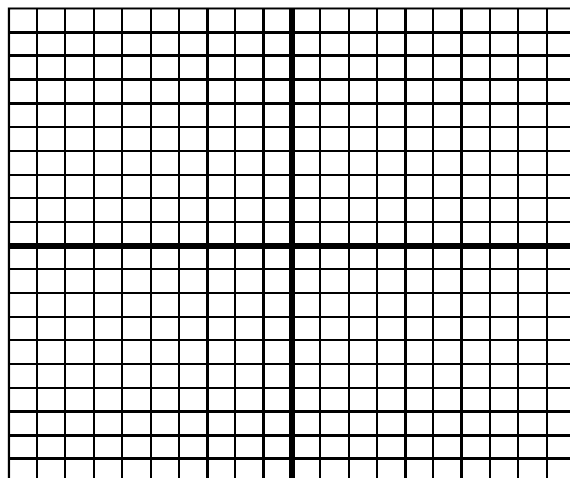
VA _____

HA _____

Hole _____

Domain _____

Range _____



7. $y = \frac{-1}{x-3}$

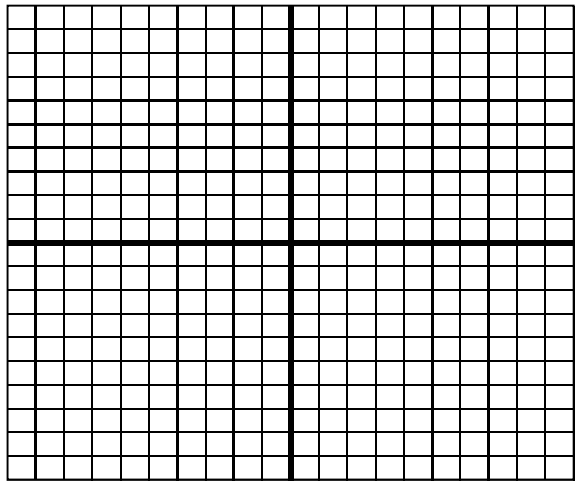
VA _____

HA _____

Hole _____

Domain _____

Range _____



8. $y = \frac{1}{x} - 3$

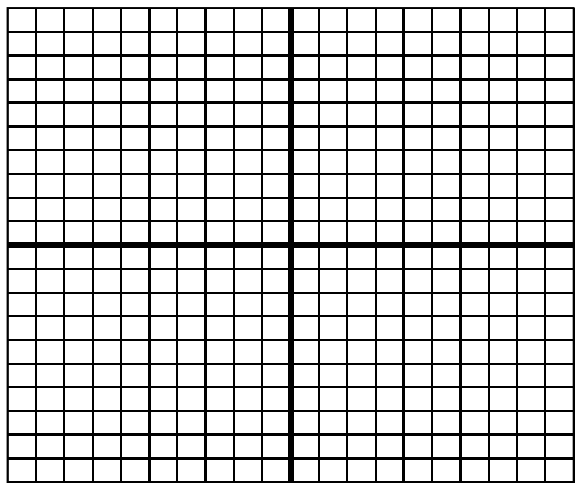
VA _____

HA _____

Hole _____

Domain _____

Range _____



9. What is the V.A.?

$$f(x) = \frac{x+5}{x+3}$$

10. What is the H.A.?

$$f(x) = \frac{5x+6}{x+3}$$

11. What is the domain restriction?

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

12. What is the Range:

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

13. What is the Domain:

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

14. Identify the hole:

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

15. What is the V.A.?

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

16. What is the H.A.?

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

17. Identify the hole:

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

18. Identify the hole:

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

19. What is the V.A.?

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

20. What is the V.A.?

$$f(x) = \frac{x^2 - 16}{2x^2 + 5x - 12}$$

21. What is the H.A.?

$$f(x) = \frac{x^2 - 16}{2x^2 + 5x - 12}$$

22. Identify the hole:

$$f(x) = \frac{x^2 - 16}{2x^2 + 5x - 12}$$

23. What is the H.A.?

$$f(x) = \frac{4x^2 + 13x - 12}{2x^2 + 13x + 20}$$

24. What is the V.A.?

$$f(x) = \frac{4x^2 + 13x - 12}{2x^2 + 13x + 20}$$

25. Identify the hole:

$$f(x) = \frac{4x^2 + 13x - 12}{2x^2 + 13x + 20}$$

26. What is the domain restriction?

$$f(x) = \frac{x^2 - 10x - 24}{x^2 - 4}$$

27. What is the range restriction?

$$f(x) = \frac{x^2 - 10x - 24}{x^2 - 4}$$

28. What is the H.A.?

$$f(x) = \frac{x^2 - 10x - 24}{x - 4}$$