

# ASYMPTOTE FORMULA

An Asymptote is a straight line that directly approaches a particular curve but does not meet that curve at any infinite point or distance. Asymptotes are the line that the curve will approach and move towards infinity. It is an essential part of mathematics and has an important step in sketching graph equations.

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#### Q1: How is the equation of a vertical asymptote represented?

A: y = a B: x = a C: y = mx + b D: x = mx + b

# Q2: What is the equation of a horizontal asymptote for a rational function?

A: y = a B: x = a C: y = mx + b D: x = mx + b

# Q3: Which functions are most likely to have a vertical asymptote at x = 3?

A:  $f(x) = (x^2 + 1) / (x - 3)$ B:  $f(x) = (x^2 + 1) / (x + 3)$ C:  $f(x) = (x^2 - 1) / (x - 1)$ D:  $f(x) = (x^2 + 1) / (x + 1)$ 

### Q4: Find the Horizontal Asymptote of $f(x) = x/x^2 + 3$

A: 2

B: 6

C: 8

D: 3

#### Q5: Find the Asymptote of f(x) = x + 1/2x

A: 5

B: 5/6

C: ½

D: 9



# Q6: Find the Horizontal Asymptote of $f(x) = (x^2 + 3) x + 1$

A: 5 B: 8 C: 9

D: None of these

#### Q7: Which of these is used for Asymptote?

A: y = ax + b B: (a + b)<sup>2</sup> C: a<sup>2</sup> + b<sup>2</sup> D: LCM

### Q8: If n is less than m, then the Asymptote Y is?

A: 4 B: 0 C: 8 D: 10

# **Q9: Identify the Types of Asymptote**

A: Oblique B: Vertical

C: Horizontal

D: All of these

# Q10: If the Denominator is zero, then the Asymptote is?

A: Vertical B: Horizontal C: Oblique D: None of these





#### Answers

**Q1:** B - x = a

- **Q2:** A y = a
- **Q3:** B f(x) =  $(x^2 + 1) / (x + 3)$
- **Q4:** D 3
- **Q5:** C ½
- Q6: D None of these
- **Q7:** A y = ax + b
- **Q8:** B 0
- Q9: D All of these
- Q10: A Vertical