

Horizontal Asymptotes



1. Find the horizontal asymptote

$$f(x) = \frac{5x^3 + 27}{20x^2 + 10x + 9}$$

Degree Num > Degree Denom

So, no HA

2. Find the horizontal asymptote

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

Degree Num = Degree Denom

So, HA @ $y =$ leading coefficients

$$- \frac{1}{4}$$

3. Find the horizontal asymptote

$$f(x) = \frac{5x^3 + 27}{20x^4 + 10x + 9}$$

Degree Num < Degree Denom

So, HA @ $y = 0$

4. Find the horizontal asymptote

$$f(x) = \frac{2x^6 + 6x^3}{4x^5 + 3x^3}$$

Degree Num > Degree Denom

So, no HA

5. Find the horizontal asymptote

$$f(x) = \frac{5x^2 + 27}{20x^2 + 10x^3 + 9}$$

Degree Num < Degree Denom

So, HA @ $y = 0$

6. Find the horizontal asymptote

$$f(x) = \frac{x - 5}{x^2 - 25}$$

Degree Num < Degree Denom

So, HA @ $y = 0$

7. Find the horizontal asymptote

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

Degree Num = Degree Denom

So, HA @ $y =$ leading coefficients

-1

8. Find the horizontal asymptote

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

Degree Num > Degree Denom

So, no HA

9. Find the horizontal asymptote

$$f(x) = \frac{\sqrt{x^2 - 14}}{2x - 3}$$

Degree Num = Degree Denom

So, HA @ $y =$ leading coefficients

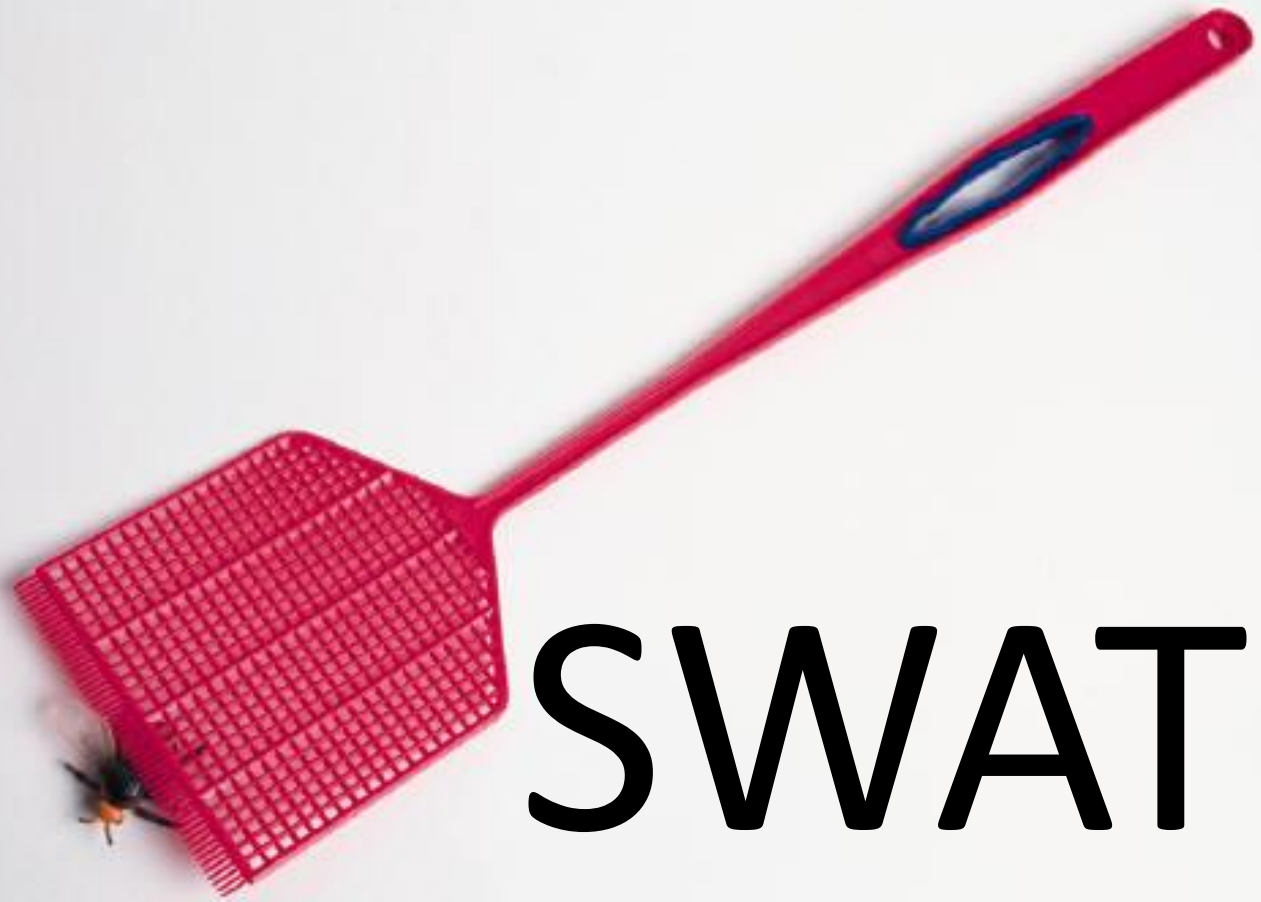
$$\frac{1}{2}$$

10. Find the horizontal asymptote

$$f(x) = \frac{\sqrt{x^2 + 5}}{2x^2 + x - 3}$$

Degree Num < Degree Denom

So, HA @ $y = 0$



SWAT