

UNIT 1- INTRO TO FUNCTIONS

$$f(x) = 3x^2 + 2x - 4$$

Evaluate

$$\frac{f(x+h) - f(x)}{h}$$

~~$f(x+h) = f(x+h)$~~
→

$$\frac{3(x+h)^2 + 2(x+h) - 4 - (3x^2 + 2x - 4)}{h}$$

$$\frac{3(x^2 + 2xh + h^2) + 2(x+h) - 4 - 3x^2 - 2x + 4}{h}$$

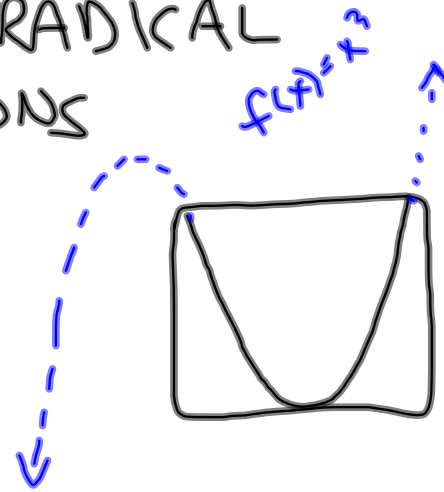
$$\frac{\cancel{3x^2} + 6xh + 3h^2 + \cancel{2x} + 2h - \cancel{4} - \cancel{3x^2} - \cancel{2x} + \cancel{4}}{h}$$

$$\frac{\cancel{h}(6x + 2 + 3h)}{h}$$

$$6x + 2 + 3h$$

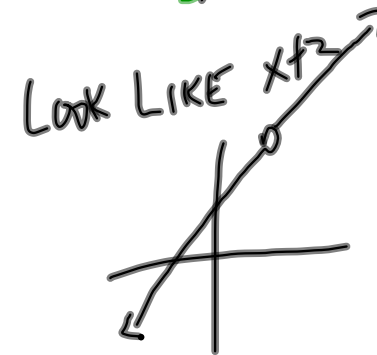
UNIT 2 - POLYNOMIAL ; RADICAL FUNCTIONS

POLYNOMIAL — SHAPES
ZEROS
MAX / MIN



RADICAL — END BEHAVIOR
ASYMPTOTES
HOLES

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

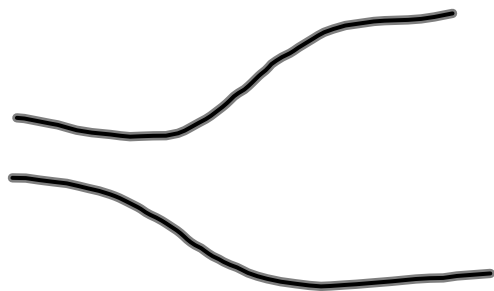


UNIT 3 - EXPONENTIAL, LOGARITHMIC, & LOGISTIC FUNCTIONS

EXPONENTIAL - $f(x) = a \cdot b^x$ or $a e^{kx}$

LOGARITHMIC - $f(x) = a \log x$ or $a \ln x$

LOGISTIC - $f(x) = \frac{c}{1+a \cdot b^x}$ or $\frac{c}{1+a e^{kx}}$



UNIT 4 - Trigonometric Functions

Focus on transformations ; graphs

NOTES PAGE

- 187 in² or less
- Handwritten (original)
- No sample problems ✓