LEAP FROG: TEACHER CARDS

If f(x) is increasing, f'(x)

(is positive)

If f(x) is concave up, f''(x)

(is positive)

If f'(x) changes from + to at its only zero, f(x)

(has an absolute maximum)

If f(x) has relative extrema, f'(x)

(equals zero)

If f''(x) changes signs, f'(x)

(has relative extrema)

If f(x) has a relative maximum, f''(x)

(is negative)

If f'(x) has a relative minimum, f''(x)

(changes from - to +)

If f'(x) is positive, f(x)

(is increasing)

If f''(x) is positive, f(x)

(is concave up)

If f'(x) changes from - to +at its only zero, f(x)

(has an absolute minimum)

If f''(x) changes signs, f(x)

(has a point of inflection)

If f'(x) is continuous, but not differentiable, f'(x)

(has a vertical tangent)

If f(x) has a relative minimum, f''(x)

(is positive)

If f''(x) changes from - to +, f'(x)

(has a relative minimum)



If f'(x) changes from + to -, f(x)If f(x) has a relative maximum, f'(x)(changes from + to -) (has a relative maximum) If f'(x) is decreasing, f''(x)If f''(x) is negative, f'(x)(is negative) (is decreasing) If f'(x) is negative, f(x)If f(x) is decreasing, f'(x)(is decreasing) (is negative) If f'(x) is increasing, f''(x)If f''(x) is positive, f'(x)(is positive) (is increasing) If f'(x) changes from - to +, f(x)If f(x) has a relative minimum, f'(x)(changes from - to +) (has a relative minimum) If f'(x) has a relative maximum, f''(x)If f''(x) changes from + to -, f'(x)(changes from + to -) (has a relative maximum) If f(x) is concave down, f''(x)If f''(x) is negative, f(x)(is negative) (is concave down)



MAKING CONNECTIONS