

32. f cont on $[-3, 2]$

f diff on $[-3, 2]$

$$f(-3) = f(2)$$

$$0 = 0$$

$f'(c) = 0$ for $c \in [-3, 2]$

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

$$f'(x) = (x-2) \cdot 2(x+3) + (x+3)^2 (1)$$

$$= (x+3) [2(x-2) + x+3]$$

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

$$= (x+3) (3x-1)$$

$$0 = (x+3) (3x-1)$$

$$x+3=0 \quad 3x-1=0$$

$$x=-3$$

$$x=\frac{1}{3}$$