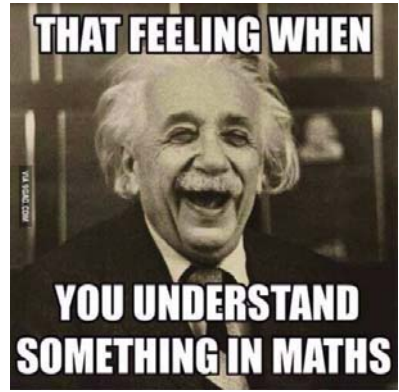


Tuesday, October 4, 2016

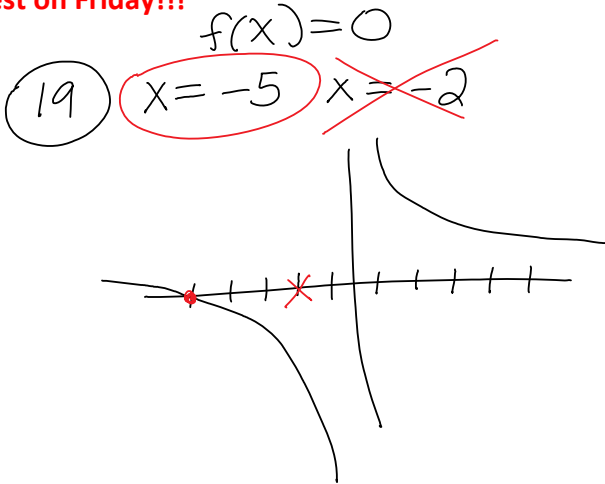
2.7 HW Check

2.8: Solving Inequalities

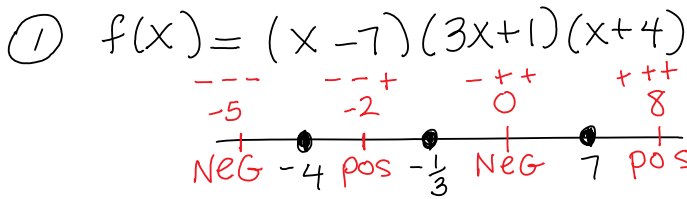
HW: Day 1 of 2.8 (from Monday)



Quest on Friday!!!



2.8 Solving Inequalities



Cubic Polynomial

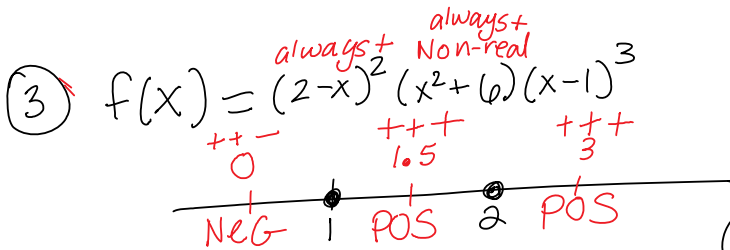
Use ① to answer:

② $(x-7)(3x+1)(x+4) \geq 0$

$[-4, -\frac{1}{3}] \cup [7, \infty)$

positives and zeros

- (A) zeros: $x = 7, -\frac{1}{3}, -4$
- (B) Positive: $(-4, -\frac{1}{3}) \cup (7, \infty)$
- (C) Negative: $(-\infty, -4) \cup (-\frac{1}{3}, 7)$



7th degree Polynomial

④ $(2-x)^2(x^2+6)(x-1)^3 < 0$

$(-\infty, 1)$

negatives only

- (A) zeros: $x = 2, 1$
- (B) positive: $(1, 2) \cup (2, \infty)$
- (C) negative: $(-\infty, 1)$

⑤ $\frac{2x+1}{x-1} \geq 0$

(Rational Inequality)

⑤ $\frac{2x+1}{(x+3)(x-1)} \geq 0$ (Rational Inequality)

positives and zeros

① zeros: $x = -\frac{1}{2}$ (numerator = 0; x-intercepts)

undefined: $x = -3, 1$ (denominator = 0)

② Positive: $(-3, -\frac{1}{2}) \cup (1, \infty)$

Answer: $\boxed{(-3, -\frac{1}{2}] \cup (1, \infty)}$