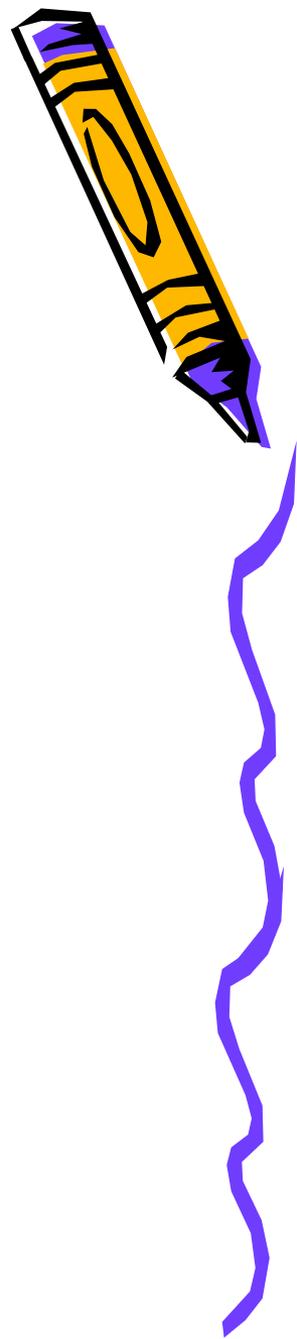
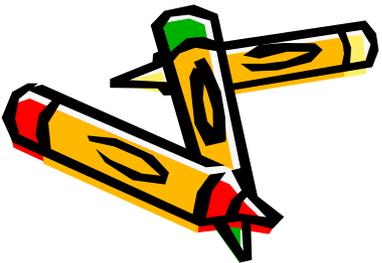
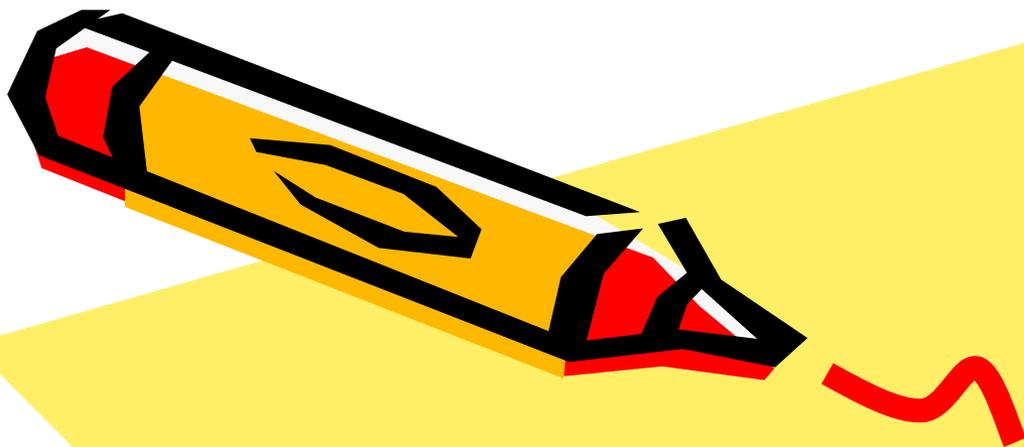


# Решить уравнения:



- $|2x - x^2| = 3;$
- $|3x + 4| = 7 - 5x;$
- $|7 + 5x| = 5x + 7;$
- $|x - 12| = |3x + 1|;$
- $|4x - 5| = 5 - 4x;$
- $9x^2 - 3|x| = 5x;$
- $|x + 3| - 2|5 - x| = 3x + 2;$

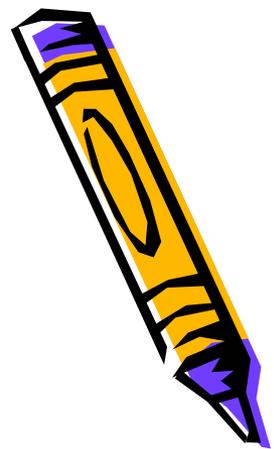




**Неравенства,  
содержащие  
модуль.**

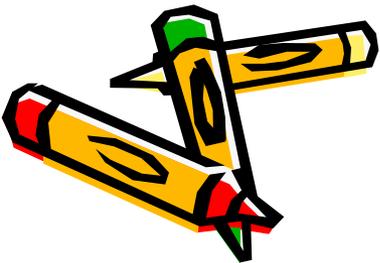


$$|f(x)| < a$$



- 1) если  $a \leq 0$ , то решения нет

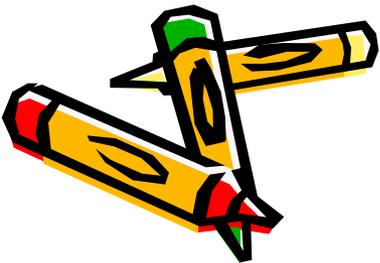
- 2) если  $a > 0$ , то 
$$\begin{cases} f(x) > -a, \\ f(x) < a. \end{cases}$$



$$|f(x)| > a$$

- если  $a \leq 0$ , то  $x$ -любое из  $D(f)$
- если  $a > 0$ , то

$$\left[ \begin{array}{l} f(x) < -a \\ f(x) > a. \end{array} \right.$$

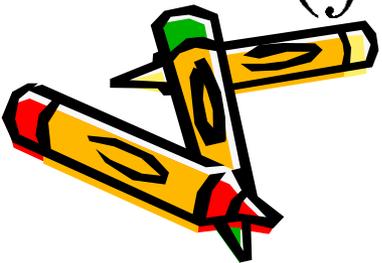
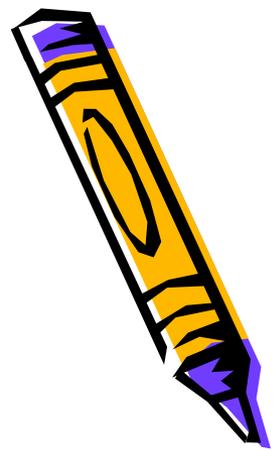


$$|f(x)| \leq |g(x)|$$

$$f^2(x) \leq g^2(x),$$

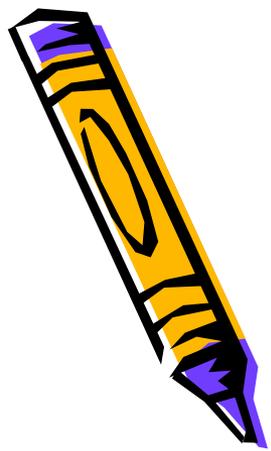
$$f^2(x) - g^2(x) \leq 0,$$

$$(f(x) - g(x))(f(x) + g(x)) \leq 0$$



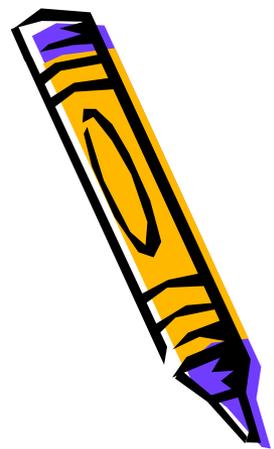
$$|f(x)| < g(x)$$

$$\begin{cases} f(x) > -g(x), \\ f(x) < g(x) \end{cases}$$

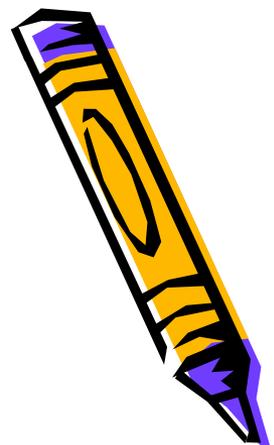


$$|f(x)| > g(x)$$

$$\left[ \begin{array}{l} f(x) > -g(x) \\ f(x) < g(x) \end{array} \right.$$



$$|f(x)| + |g(x)| < h(x)$$



- Через критические точки

