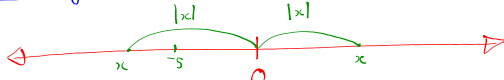


3.6 Absolute Value Function

Goal • Graph variations of absolute value function.
Solve absolute value equations.

Absolute Value function $f(x) = |x| = \begin{cases} x & , x \geq 0 \\ -x & , x < 0 \end{cases}$

Geometrically:



Absolute value of x = distance from x to 0 on the number line.

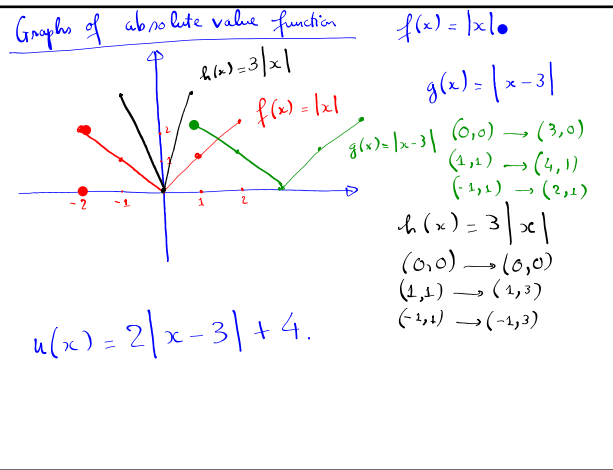
Distance between 2 numbers a and b is given by $|a - b|$

E.g. Students who score within 20 points of 80 will pass a test. Write this as a distance from 80 using the absolute value notation.

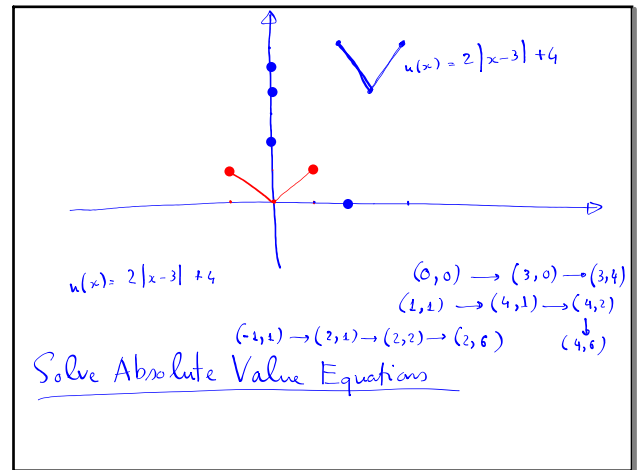
$$|x - 80| \leq 20$$

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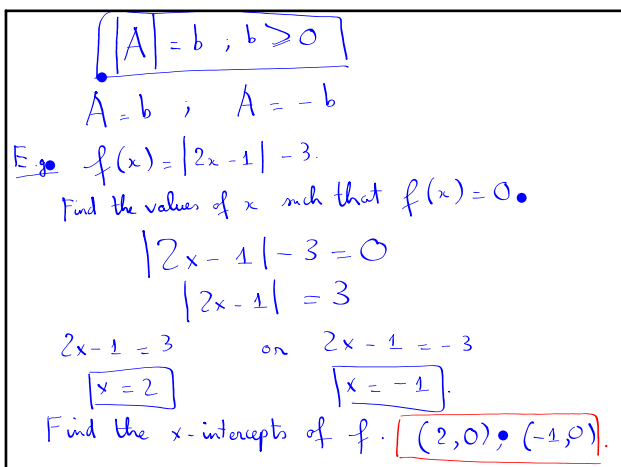
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