Math 1513 - College Algebra

Quiz #13 - 2018.10.08

Solutions

If $F(x)$ is defined piecewise as given below, evaluate $F(-3)$, $F(-1/2)$, $F(0)$ and $F(1)$.

$$F(x) = \begin{cases} 2x+1, & -5 \le x < -3 \\ -3x+4, & -3 \le x < -1 \\ |1+2x|, & -1 \le x < 0 \\ 7, & 0 \le x < 4 \\ -2x+1, & x \ge 4 \end{cases}$$

For $F(-3)$, we use the piece $-3x+4$, which is defined at $x=-3$, thus $F(-3) = -3 \cdot -3 + 4 = 13$.

For $F(-1/2)$, we use $|1+2x|$, $F(-1/2) = |1+2\cdot(-1/2)| = 0$.

The last two are both defined on the interval $[0,4)$ to be the constant value 7, i.e. $F(0) = F(1) = 7$.