

Practice Test Quiz 1

1. (4pts)

Find the implied domain for $f(x) = \sqrt{-2x^2 + 9x - 9}$, and evaluate $f(0)$ if possible.

2. (8 pts)

Given $A(-2, 2)$ and a line $L: y = 2x + 1$,

(1) Find a parallel line M and a perpendicular line N pass through A .

(2) Let $B(x_2, y_2)$ be the intersection of L and N . $C(x_3, y_3)$ is on the line M . What are the coordinates of the B and C ?

3. (8 pts)

Graph $f(x) = -\frac{1}{2}|x + 3| + \frac{1}{2}|x - 4|$ for the entire domain and

identify (1) when $f(x)$ will be increasing, decreasing or constant. (2) the relative maximums and relative minimums.

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4. (4 pts)

Sketch $f(x)$, find x and y intercept of $f(x)$ if

$$f(x) = \begin{cases} x-1, & x \leq -2 \\ \sqrt{x-4}, & x > 5 \end{cases}$$

5. (4 pts)

Graph $h(x)$ based on the given parent function $f(x)$. Identify the transformations.

$$f(x) = x^2$$

$$h(x) = (2x+1)^2$$