Name Key

Quiz #1

MATH 105 – Amber Buntin – Fall 2015

Please **show as many algebraic steps as possible** while simplifying, evaluating, and solving.

1. Given $f(x)=\begin{cases} -4x-32 & \text{if } x<-3 \\ 2x^2-3x+5 & \text{if } x\geq -3 \end{cases}$, find

a. $f(-6)$

$x=-6$
$-6<-3$ ✓

$= -4(-6)-32$
$= 24-32$
$= \boxed{-8}$

b. $f(-3)$

$x=-3$
$x\geq -3$
$-3\geq -3$ ✓

$= 2(-3)^2-3(-3)+5$
$= 2(9)+9+5$
$= 18+9+5$
$= 27+5$
$= \boxed{32}$

2. Find the equation of the line through $(\underset{x_1}{5}, \underset{y_1}{-6})$ with a slope of $-\frac{7}{6}$. Leave answer in slope- intercept form and reduce ALL fractions to lowest terms (no decimals).

$y-y_1=m(x-x_1)$
$y-(-6)=-\frac{7}{6}(x-5)$
$y+6=-\frac{7}{6}x+\frac{35}{6}$
$y=-\frac{7}{6}x+\frac{35}{6}-\frac{6}{1}\cdot\frac{6}{6}$
$y=-\frac{7}{6}x+\frac{35}{6}-\frac{36}{6}$

$$\boxed{y=-\frac{7}{6}x-\frac{1}{6}}$$

People who used...

$y=mx+b$	$y-y_1=m(x-x_1)$
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