Key

Math 95
Quiz 2 (2.5, 4.1)

1) Find the intercepts of the function: $4x+2g(x)=7$. Then graph the functions by using the intercepts.

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x-intercepts:

Set $g(x)=0$ and solve for x

$4x+2(0)=7$

$4x=7$

$x=7/4$

$(7/4, 0)$ $(1\ 3/4, 0)$

y-intercepts

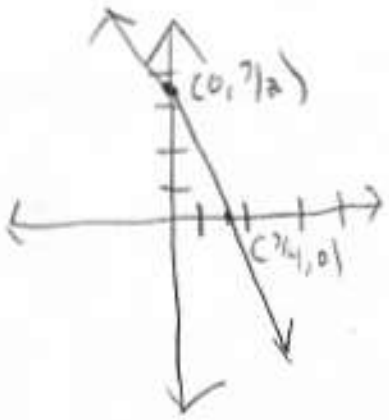
Set $x=0$ and solve for y:

$4(0)+2g(x)=7$

$g(x)=7/2$

$(0, 7/2)$

$(0, 3\ 1/2)$



2)

a) Find a linear function parallel to $2x+6y=4$ with a .y-intercept=(0,6).

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$2x+6y=4$

$6y=-2x+4$

$y=\frac{-1}{3}x+\frac{4}{6}$

$m=\frac{-1}{3}$

Parallel line:

slope $m=-\frac{1}{3}$ $b=6$

$y=mx+b$

$y=-\frac{1}{3}x+6$

b) Find a linear function perpendicular to $2x+6y=4$ with a .y-intercept=(0,6).

perpendicular:

$(m)(m_1)=-1$

$-\frac{1}{3}(m_1)=-1$

$m_1=3$

$y=m_1x+b$ where $b=6$

$y=3x+6$

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3) Write all solutions for the inequality, $x \leq -7$, using both set **and** interval notation.

$x \leq -7$

Set notation

$\{x \mid x \leq -7\}$

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Interval notation

$(-\infty, -7]$

4) Solve and write solutions using set **or** interval notation for the following inequality: $5[3m-(m+4)] > -2(m-4)$

$5[3m-(m+4)] > -2(m-4)$

$5[2m-4] > -2m+8$

$10m-20 > -2m+8$

$12m > 28$

$m > \frac{28}{12}$

$m > \frac{7}{3}$

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Set notation

$\{m \mid m > \frac{7}{3}\}$

Interval notation

$(7/3, \infty)$