Answers

Math 1201 Review Questions **Systems of Equations**

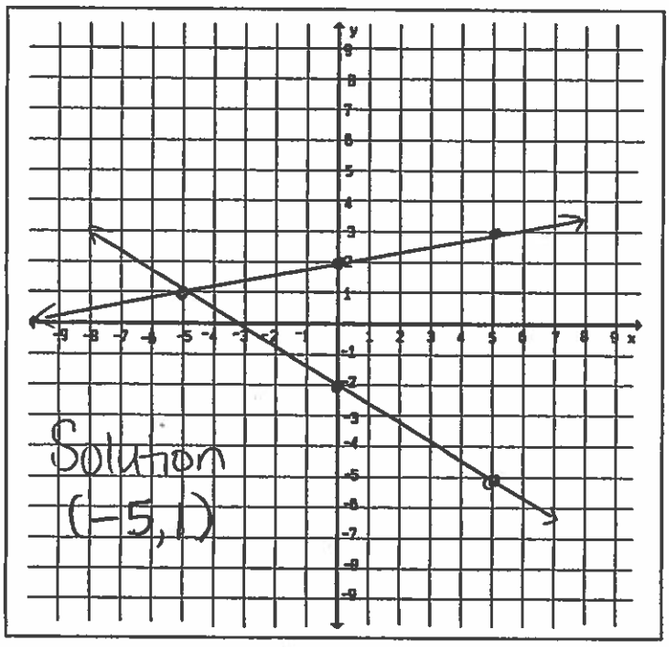
1. Solve each linear system by graphing.

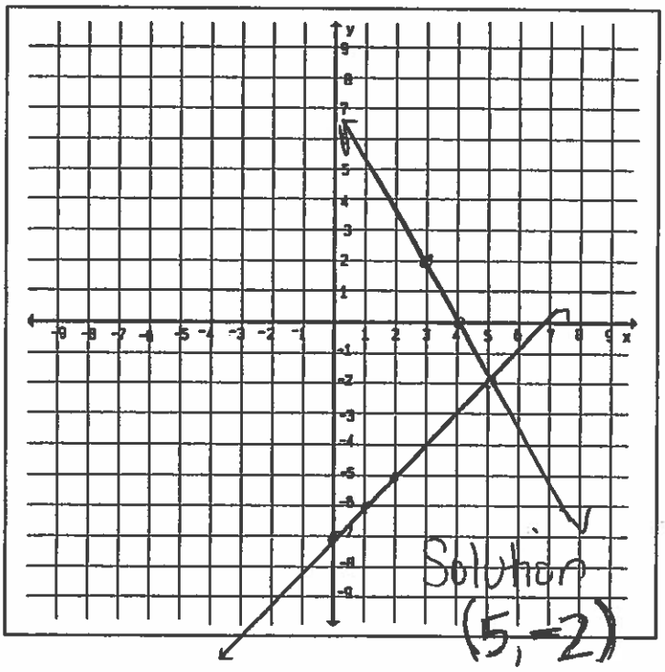
a) $y=\frac{1}{5}x+2$ $m=\frac{1}{5}$ $b=2$

$y=-\frac{3}{5}x-2$ $m=-\frac{3}{5}$ $b=-2$

b) $y=x-7$ $m=1$ $b=-7$

$y-2=-2(x-3)$ $m=-2$ pt $(3,2)$





2. Solve each linear system algebraically, using elimination or substitution.

a) elimination

$3(4x-3y=11)$

$-4(3x-5y=-11)$

$12x-9y=33$

$-12x+20y=44$

$11y=77$

$y=7$

$4x-3(7)=11$

$4x-21=11$

$4x=32$

$x=8$

$(8,7)$

b) Substitution

$x=-2y+1$

$2x-2y=-10$

$2(-2y+1)-2y=-10$

$-4y+2-2y=-10$

$-6y+2=-10$

$-6y=-12$

$y=2$

$x=-2(2)+1$

$x=-4+1$

$x=-3$

$(-3,2)$

c) line up!

$6x+3y-27=0$

$y+2x=9$

$6x+3y=27$

$(2x+y=9)$

$6x+3y=27$

$-6x-3y=-27$

$0\ \ 0=0$

coincident lines

infinite solutions

d) $\left(\frac{2}{3}x+\frac{5}{6}y=\frac{1}{2}\right)6$ $-3(4x+5y=3)$

$\left(\frac{3}{4}x-\frac{1}{2}y=\frac{2}{1}\right)4$ $4(3x-2y=8)$

$-12x-15y=-9$

$12x-8y=32$

$-23y=23$

$y=-1$

$3x-2(-1)=8$

$3x+2=8$

$3x=6$

$x=2$

$(2,-1)$