Solving Systems Test

1) $3x+2y=2$
$2x-y=-15$

$3x+2y=2$
$4x-2y=-30$
$7x=-28$
$x=4$
$y=-5$

$3(4)+2y=2$
$12+2y=2$
$2y=-10$
$y=-5$

$x=4$
$y=-5$

2) $2a-3b+7c=96$
$-5a+4b-2c=-59$
$4a+7b-3c=-34$

$13b-17c=-226$
$-7b+31c=362$
$91b-119c=-1582$
$-91b+403c=4706$
$284c=3124$
$c=11$

$2a-3b+7c=96$
$4a+7b-3c=-34$
$-4a+6b-14c=-192$
$4a+7b-3c=-34$
$13b-17c=-226$

$13b-17(11)=-226$
$13b-187=-226$
$13b=-45$
$b=3\frac{6}{13}$

$2a-3b+7c=96$
$-5a+4b-2c=-59$
$10a-15b+35c=480$
$-10a+8b-4c=-118$
$-7b+31c=362$

$2a-3(3\frac{6}{13})+7(11)=96$
$2a-10\frac{2}{13}+77=96$
$2a=96+10\frac{2}{13}-77$
$a=14\frac{9}{13}$

$a=14\frac{9}{13}$, $b=3\frac{6}{13}$, $c=11$

Solving Systems Test

3) $6^{3m+n} = 1296$

$5^{4m+2n} = 25$

$1296 = 6^4$

$25 = 5^2$

$3m+n = 4$

$4m+2n = 2$

$-6m-2n = -8$

$4m+2n = 2$

$-2m = -6$

$m = 3$

$3(3)+n = 4$

$9+n = 4$

$n = -5$

$m = 3$

$n = -5$

4) $\frac{4}{243} \div \frac{4}{3} = \frac{1}{81}$

$\frac{1}{245} \div \frac{7}{5} = \frac{1}{343}$

$\frac{1}{343} = 7^{-3}$

$\frac{1}{81} = 9^{-2}$

$2x-6y = -2$

$x-2y = -3$

$2x-6y = -2$

$-2x+4y = 6$

$-2y = 4$

$y = -2$

$2x-6(-2) = -2$

$2x+12 = -2$

$2x = -14$

$x = -7$

$x = -7$

$y = -2$