3C Unit 0 Skills Test Name: Solutions

	R	1	2	3	4
M1: Make connections between the numeric, graphical, and algebraic representations					

SHOW ALL YOUR WORK!

1. Expand and simplify:

a) $7+3(2-x)$

$=7+3(2)+3(-x)$

$=7+6-3x$

$=13-3x$

b) $3^2+4\times5\div10-18$

$=3\times3+4\times5\div10-18$

$=9+20\div10-18$

$=9+2-18$

$=-7$

2. Solve for x:

a) $-3x=21$

$\frac{-3x}{-3}=\frac{21}{-3}$

$x=-7$

b) $8(2x+3)=-4(x-2)$

$8(2x)+8(3)=-4(x)-4(-2)$

$16x+24=-4x+8$

$16x+4x=8-24$

$20x=-16$

$x=-\frac{16}{20}$

$=-\frac{4}{5}$

c) $\frac{x}{2}+1=\frac{x}{3}+\frac{x}{4}-2$

$\frac{6(x)}{12}+\frac{12}{12}=\frac{4(x)}{12}+\frac{3(x)}{12}-\frac{24}{12}$

$\frac{6x+12}{12}=\frac{4x+3x-24}{12}$

$12\left(\frac{6x+12}{12}\right)=12\left(\frac{4x+3x-24}{12}\right)$

$6x+12=4x+3x-24$

$6x-4x-3x=-24-12$

$-x=-36$

$x=36$

d) $\frac{(5x-2)}{3}-5=\frac{(x+1)}{2}$

$\frac{5x-2}{3}-\frac{15}{3}=\frac{x+1}{2}$

$\frac{5x-17}{3}=\frac{x+1}{2}$

$2(5x-17)=3(x+1)$

$10x-34=3x+3$

$7x=37$

$x=\frac{37}{7}$

Slopes and Graphing:

3. State the slope

a) $2x-3y-17=0$

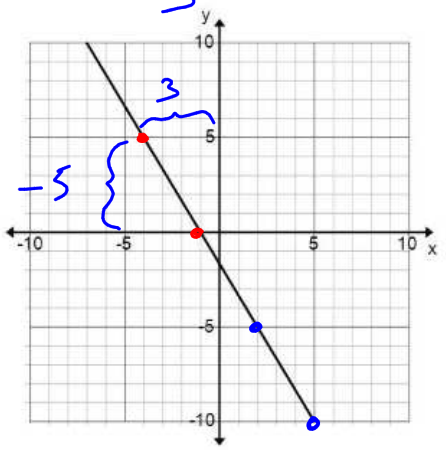
$2x-17=3y$

$\frac{2}{3}x-\frac{17}{3}=y$

$y=\frac{2}{3}x-\frac{17}{3}$

$m=$ $\frac{2}{3}$

b)



$m=\frac{-5}{3}$

4. On the grid, graph:

a) $y=\frac{-3}{4}x+7$ y-int

b) $2x-3y=6$

$2x-6=3y$

$\frac{2}{3}x-\frac{6}{3}=y$

$\frac{2}{3}x-2=y$

c) $y=4$