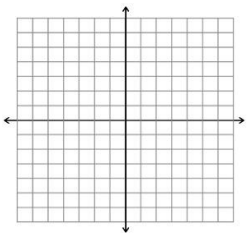
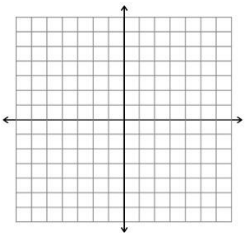
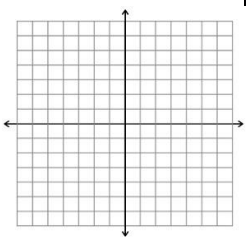
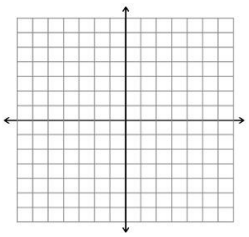
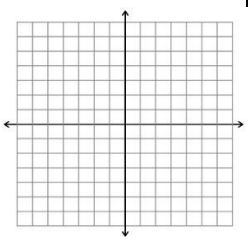
HONORS I LEARNING TARGET **1st Semester** STUDY GUIDE SHEET Name: _____

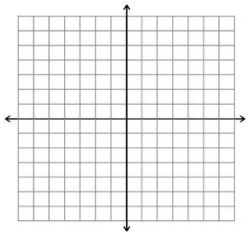
2.3/2.4/2.8 – solve multi-step equations	3.1a – graph linear equations using a table 	3.1b – graph linear equations using intercepts 
3.3 - find the slope of a line between two points	4.1 – graph an equation using slope-intercept form 	4.2 – write linear equations in slope-intercept form
1.7 – interpret/evaluate function notation If $f(x)=2x+5$ find $f(-7)=2(-7)+5=-9 \Rightarrow (-7,-9)$ x if $f(x)=23$. $2x+5=23$ $2x=18 \quad x=9$ $(9,23)$	4.3 – write equations in point-slope form Book: $y-y_1=m(x-x_1)$ Bruin: $y=y_1+m(x-x_1)$ past Line through $(-3,8)$ with slope $=4/5$. $y=8+\frac{4}{5}(x-(-3))$ $y=8+\frac{4}{5}(x+3)$	4.4 – write equations for parallel/perpendicular lines If $y=2x-8$ parallel $\Rightarrow m=2$ perpendicular $\Rightarrow m=-1/2$ Find line perpendicular to $y=-2x+24$ through $(7,10)$. $m=\frac{1}{2}$ $y=\frac{1}{2}x+b$ $10=\frac{1}{2}(7)+b$ $10=3.5+b$ $6.5=b$ $y=\frac{1}{2}x+6.5$
4.7 – find and evaluate inverse functions	5.3 – solve multi-step inequalities	5.4 – solve compound inequalities
5.5 – solve absolute value inequalities	5.6 – graph linear inequalities 	6.1 – solve systems of equations by graphing 

6.2 – solve systems of equations by substitution

6.3 – solve systems of equations by simple elimination

6.4 – solve systems of equations by elimination

6.6 – solve systems of linear inequalities



7.1/7.2 – apply exponent product/quotient properties

$(3x^3y^5)^2(-2xy^4) = 9x^6y^{10} \cdot -2x^1y^4$

$-18x^7y^{14}$

$\frac{18p^0x^{-3}y^2z^8}{6x^3y^{-5}z^7} = \frac{3y^7z}{x^6}$

7.3 – simplify rational exponents

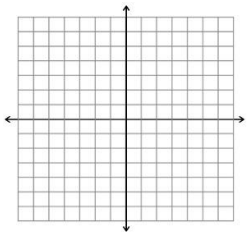
$8^{4/3} = (8^{1/3})^4 = 2^4 = 16$

$25^{3/2} = (25^{1/2})^3 = 5^3 = 125$

$*\ 8^{1/3} = \sqrt[3]{8}$

$25^{1/2} = \sqrt{25}$

7.5 – write and graph exponential functions



7.6 – solve exponential growth and decay word problems

$y = A(1 \pm r)^t$ $+ \Rightarrow$ growth $- \Rightarrow$ decay

Sports car purchased for $27,000 depreciates 12.5% per year. What's the value after 10 years?

$y = 27{,}000(1-.125)^{10}$

$y = 27{,}000(0.875)^{10} = \$7{,}103$

8.1 – add/subtract polynomials

$(7x^2-3) - (5x^2+2x-8)$

$x^2 \quad x \quad 1$

$7x^2 + 0x - 3$

$+ \ -5x^2 + -2x + 8$

$2x^2 - 2x + 5$

8.2-8.4 – multiply polynomials

8.6 – factor and solve quadratic equations

$x^2 - 6x = -8$ *need one side = 0

A M

$x^2 - 6x + 8 = 0$

$(x-4)(x-2) = 0$

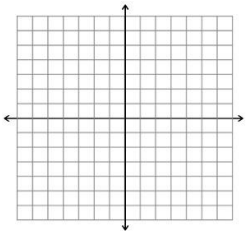
$x = 4$ $x = 2$

$2x^2 - 6x = 0$

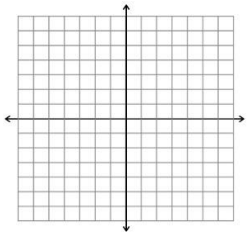
$(2x)(x-3) = 0$

$x = 0$ $x = 3$

9.3a – graph quadratics by making a table and stretching vertically/moving up and down



9.2/9.3c – graph quadratics by factoring first to find the zeros



Use this space for anything else you feel you need on your sheet.