Mastery Algebra 1 **Final Review #2** Name KEY

1. Solve
$5m-2(m+4)=-(2m+15)-3$

$m=-2$

2. Solve
$\frac{x+4}{5}=\frac{x-2}{7}$

$x=-19$

3. What shape should each graph be?

a) y=|3x-5| Vee

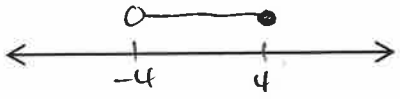
b) $y=3-2x^2$ Parabola (sad)

c) y=3x+2 Line

d) $y=3x^2-4x+2$ Parabola (happy)

e) y=4-|x+2| Vee (upside-down)

4. Solve and graph on a number line
$-3<2x-1\leq 7$



Solution: $-1<x\leq 4$

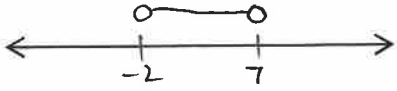
5. Solve and graph on a number line
$4v+3\leq -5$ *or* $-2v+7<1$

Solution: $v\leq -2$ or $v>3$

6. Solve and graph on a number line
$|2p+5|=11$

Solution: $p=-8$ or $p=3$

7. Solve and graph on a number line
$|2c-5|<9$



Solution: $-2<c<7$

8. A) Put into slope intercept form and graph, label A
5x-2y=10

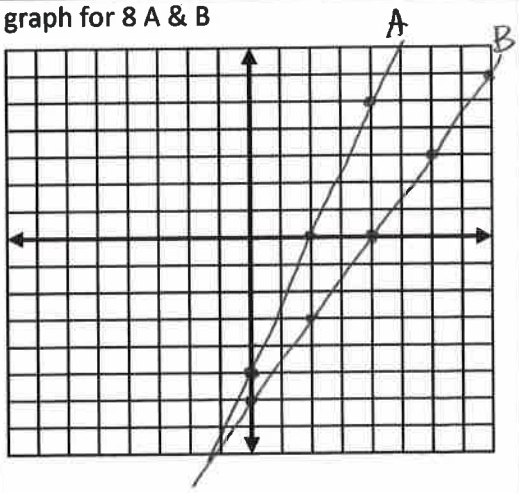
$y=\frac{5}{2}x-5$

B) Use the method of intercepts to graph the line, label B (show work)

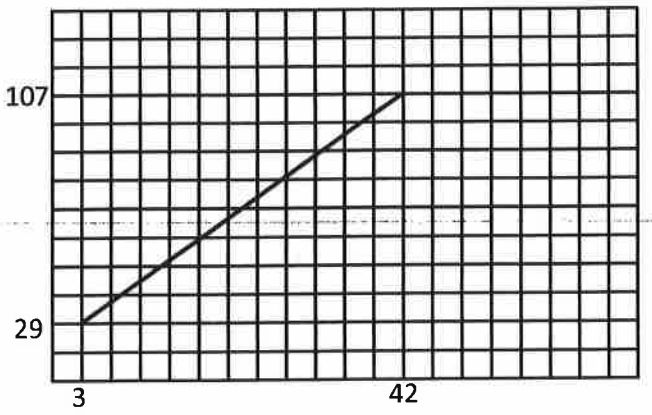
3x-2y=12

(0,-6) (4,0)

graph for 8 A & B



9.



Write the equation of the line above, in slope intercept form.

$y = 2x + 23$

10. Write the equation of the line, in slope intercept form, that is parallel to y=3x+2 and passes through (-2,8)

$y = 3x + 14$

11. Write the equation of the line, in slope intercept form, that is perpendicular to y=3x+2 and passes through (-6,-20)

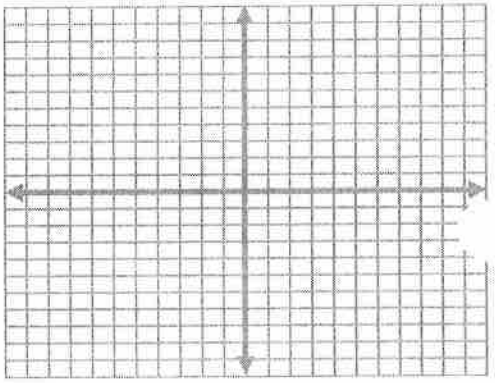
$y = -\frac{1}{3}x - 22$

12. Solve by graphing and CHECK!

y=2x-3

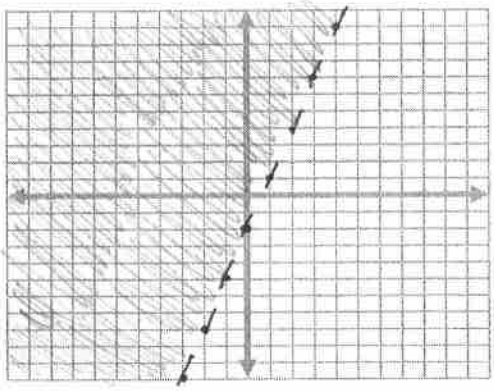
y=x-1

(2,1)



13. Solve by substitution or elimination

2x+5y=-22
10x+3y=22

(4,-6)

14. Graph 3x-y<2