$\qquad$ Date $\qquad$ Period $\qquad$
Equation Master

1. $\mathbf{\text { Match each equation with its graph. }}$ Answer the questions completely.

Equations
A) $2 x+3 y=6$
B) $y=3 x+4$
C) $y+2=-x$
D) $3 x-5 y=15$
2. Investigation.

First, plot the following points on the graph.
$A(6,2)$
$B(2,2)$
$C(0,2)$
$D(-5,2)$
$E(-7,2)$
Second, connect the points with a line.

Third, describe the line containing all five points with an equation.


Fourth, make an inference about what this demonstrates.
3. Investigation, continued.

First, plot the following points on the graph.
$A(-3,-8)$
$B(-3,-1)$
$C(-3,0)$
$D(-3,3)$
$E(-3,5.5)$
Second, connect the points with a line.

Third, describe the line containing all five points with an equation.


Fourth, evaluate your earlier inference. Does it still hold true? Does it need to be adjusted?
4. Match each equation with its graph.


Equation:


Equation:


Equation:


Equation: $\qquad$
Equations
E) $2 x=6$
F) $y=3$
G) $5 y=-20$
H) $x=-3$
5. Graph each equation.
I) $y=-3$

J) $x=3.5$
K) $3 y=-21$
L) $x=-2+y$



