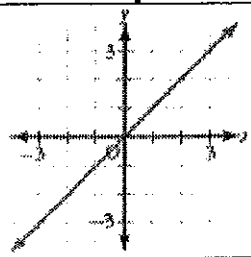
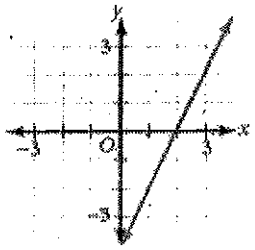
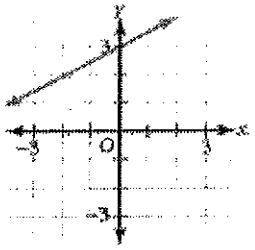
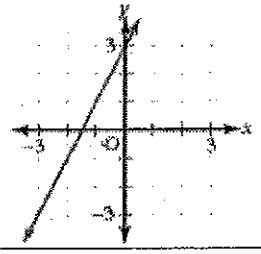
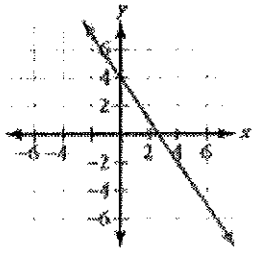
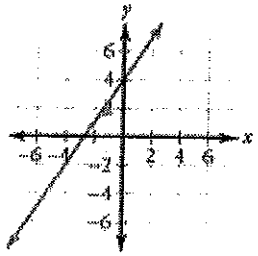
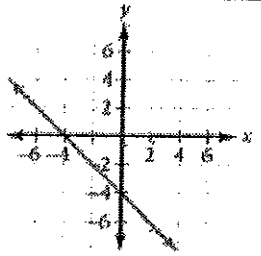
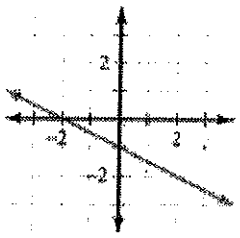
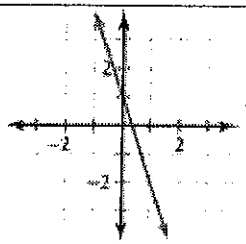
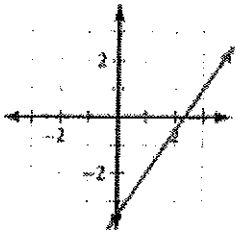
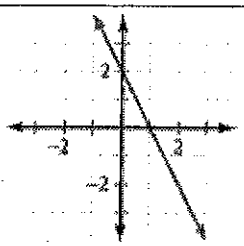
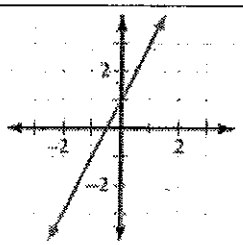
#5 5-4

Algebra Lab
Matching Graphs and Equations

Name _____

For each graph in the left hand column, find its matching equation in both slope-intercept form and point-slope form and glue the equation in the blank columns on the right.

Graph	Slope-Intercept Form	Point-Slope Form
	$y = x$	$y-1 = 1(x-1)$
	$y = 2x-4$	$y+2 = 2(x-1)$
	$y = \frac{1}{2}x+3$	$y-2 = \frac{1}{2}(x+2)$
	$y = 2x+3$	$y-1 = 2(x+1)$
	$y = -\frac{3}{2}x+4$	$y+2 = -\frac{3}{2}(x-4)$

	$y = \frac{3}{2}x + 4$	$y+2 = \frac{3}{2}(x+4)$
	$y = -x - 4$	$y+0 = -(x-2)$
	$y = -\frac{1}{2}x - 1$	$y+2 = -\frac{1}{2}(x-2)$
	$y = -3x + 1$	$y+2 = -3(x-1)$
	$y = \frac{3}{2}x - \frac{7}{2}$	$y+2 = \frac{3}{2}(x-1)$
	$y = -2x + 2$	$y+2 = -2(x-2)$
	$y = 2x + 1$	$y-3 = 2(x-1)$

Writing Linear Eq. #10

(1) $(3,-4)$ $m=2$
$y+4=2(x-3)$

(2) $(-1,5)$ $m=-\frac{4}{3}$
$y-5=-\frac{4}{3}(x+1)$

(3) $(8,0)$ $m=\frac{7}{2}$
$y=\frac{7}{2}(x-8)$

(4) $(-2,-9)$ $m=-\frac{1}{10}$
$y+9=-\frac{1}{10}(x+2)$

(5) $(0,-6)$ $m=-3$
$y+6=-3x$

(6) $(8,5)$ $m=\frac{1}{4}$
$5=\frac{1}{4}(8)+b$
$5=2+b$
$3=b$
$\boxed{y=\frac{1}{4}x+3}$

(7) $(4,-1)$ $m=-2$
$-1=-2(4)+b$
$-1=-8+b$
$7=b$ $\boxed{y=-2x+7}$

(8) $(-6,2)$ $m=\frac{5}{3}$
$2=\frac{5}{3}(-6)+b$
$2=-10+b$
$12=b$ $\boxed{y=\frac{5}{3}x+12}$

(9) $(-7,-4)$ $m=-\frac{1}{2}$
$-4=-\frac{1}{2}(-7)+b$
$-4=\frac{7}{2}+b$
$-\frac{15}{2}=b$ $\boxed{y=-\frac{1}{2}x-\frac{15}{2}}$

(10) $(\frac{3}{2},0)$ $m=5$
$0=5(\frac{3}{2})+b$
$0=\frac{15}{2}+b$
$-\frac{15}{2}=b$ $\boxed{y=5x-\frac{15}{2}}$

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Skip

Point-Slope Equations #7

(1) $y-1=1(x-4)$

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

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

(4) $(2,1)$ $m=4$
$y-1=4(x-2)$

(5) $(-7,2)$ $m=6$
$y-2=6(x+7)$

(6) $(8,3)$ $m=1$
$y-3=1(x-8)$

(7) $(-6,7)$ $m=0$
$y-7=0(x+6)$ $(y=7)$

(8) $(4,9)$ $m=\frac{3}{4}$
$y-9=\frac{3}{4}(x-4)$

(9) $(-4,-5)$ $m=-\frac{1}{2}$
$y+5=-\frac{1}{2}(x+4)$

(10) $m=0$
$y+2=0(x-4)$
OR
$y=-2$

(11) $m=0$
$y-6=0(x+5)$
OR
$y=6$

(12) $m=0$
$y-0=0(x-5)$
OR
$y=0$

Point-Slope Eq. #8

(1) $y+2=3(x+1)$

(2) $y+2=-1(x-1)$

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

(4) $(3,1)$ $m=0$
$y-1=0(x-3)$
OR
$y=1$

(5) $(-4,6)$ $m=8$
$y-6=8(x+4)$

(6) $(1,-3)$ $m=-4$
$y+3=-4(x-1)$

(7) $(4,-6)$ $m=1$
$y+6=1(x-4)$

(8) $(3,3)$ $m=\frac{4}{3}$
$y-3=\frac{4}{3}(x-3)$

(9) $(-5,-1)$ $m=-\frac{5}{4}$
$y+1=-\frac{5}{4}(x+5)$

#s 10 - 18 - skip

(19) $y-4=3(x-2)$
$y-4=3x-6$
$\boxed{y=3x-2}$

(20) $y+2=-(x+4)$
$y+2=-x-4$
$\boxed{y=-x-6}$

(21) $y-6=-2(x+2)$
$y-6=-2x-4$
$\boxed{y=-2x+2}$

(22) $y+1=-5(x-3)$
$y+1=-5x+15$
$\boxed{y=-5x+14}$

(23) $y-3=6(x-1)$
$y-3=6x-6$
$\boxed{y=6x-3}$

(24) $y-8=3(x+5)$
$y-8=3x+15$
$\boxed{y=3x+23}$

(25) $y-2=\frac{1}{2}(x+0)$

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

$\boxed{y=\frac{1}{2}x+5}$

(26) $y+1=-\frac{1}{3}(x+9)$

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

$\boxed{y=-\frac{1}{3}x-4}$

(27) $y-\frac{1}{2}=x+\frac{1}{2}$

$\boxed{y=x+1}$

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1-6 · 18-27

(1) $y-2=3(x-2)$

(2) $y+6=-1(x-1)$

(3) $y+4=0(x+3)$

(4) $y-3=-\frac{3}{4}(x-1)$

(5) $y-5=-\frac{2}{5}(x+8)$

(6) $y+3=\frac{1}{3}(x-3)$

(18) $y-3=-5(x+12)$

$y-3=-5x-60$

$+3 \qquad +3$

$\boxed{y=-5x-57}$

(19) $y-5=\frac{3}{2}(x+4)$

$y-5=\frac{3}{2}x+6$

$+5 \qquad +5$

$\boxed{y=\frac{3}{2}x+11}$

(20) $y-\frac{1}{4}=-3(x+\frac{1}{4})$

$y-\frac{1}{4}=-3x-\frac{3}{4}$

$+\frac{1}{4} \qquad +\frac{1}{4}$

$\boxed{y=-3x-\frac{1}{2}}$

(21) $y-\frac{2}{3}=-2(x-\frac{1}{4})$

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

$+\frac{2}{3} \qquad +\frac{2}{3}$

$\boxed{y=-2x+\frac{7}{6}}$

$\frac{1}{12}+\frac{2}{3}$

$\frac{3}{10}+\frac{4}{6}=\frac{17}{60}$

(22) $x=$ hr $y=$ $ hr $

$y=15x+b$ (9, 195)

$195=15(9)+b$

$195=135+b$

$-135 \quad -135$

$60=b$

$\boxed{y-195=15(x-9)}$

(23) $\boxed{y=15x+60}$

(24) $\boxed{b=\$60}$

(25) $x=$ mi $y=$ $

$\boxed{y-64=.50(x-48)}$

(26) $y-64=.50(x-48)$

$y-64=.50x-24$

$+64 \qquad +64$

$\boxed{y=.50x+40}$

(27) $\boxed{b=\$40}$