Geometry
Ch 13 Review Worksheet

Name Key
Period

For problems 1 and 2, find the slope and y-intercept of the line.

#1. $y = -5x + 2$

slope = -5
y-intercept = 2
(0, 2)

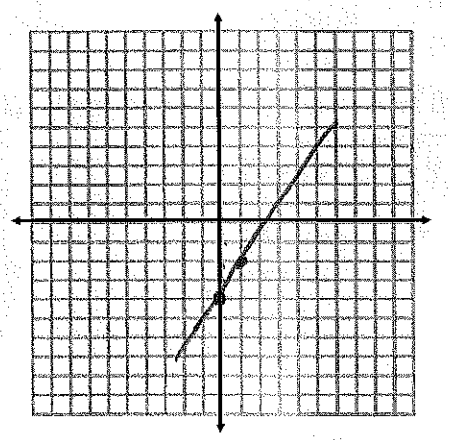
#2. $18x + 3y = 3$

$3y = -18x + 3$
$y = -6x + 1$

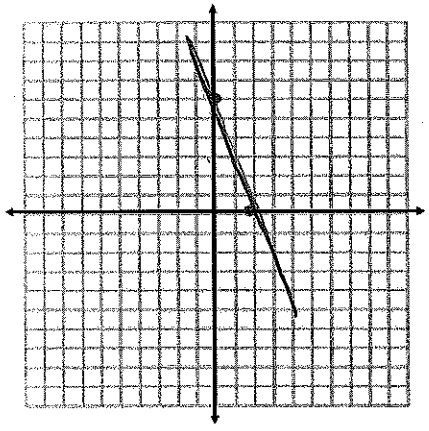
slope = -6
y-intercept = 1
(0, 1)

For problems 3 – 6, graph the line.

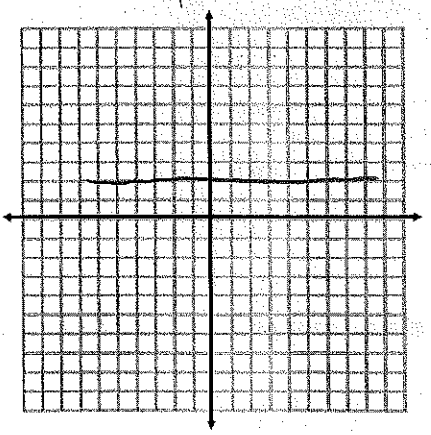
#3. $y = 2x - 4$



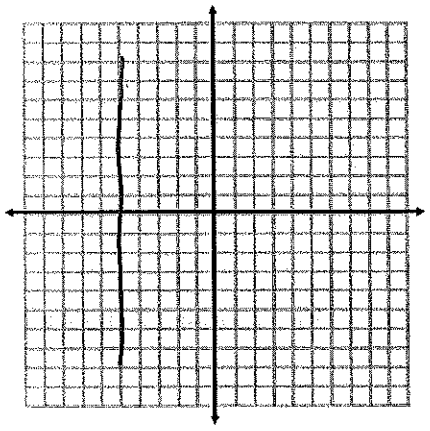
#4. $9x + 3y = 18$



#5. $y = 2$



#6. $x = -5$



#7. Is the point (-1, 6) on the graph of $y = -2x + 3$?

$6 \stackrel{?}{=} -2(-1) + 3$
$6 \stackrel{?}{=} 2 + 3$
$6 \neq 5$ no

For problems 8 – 10, say whether the pair of lines are parallel, perpendicular, or intersecting.

#8. $y = 2x + 4$
$y = -\frac{1}{2}x + 3$

negative, reciprocal slope,
perpendicular

#9. $y = -4x + 2$
$y = 3x + 2$

intersecting

#10. $y = x - 7$
$y = x + 1$

same slope,
parallel

#11. Solve the system of equations using substitution or elimination.

$$\begin{cases} 3x - y = 2 \\ 2x + 2y = 12 \end{cases}$$

Substitution

$3x - y = 2$

$-3x \quad -3x$

$-y = 2 - 3x$

$y = 3x - 2$

$2x + 2(3x - 2) = 12$

$2x + 6x - 4 = 12$

$8x - 4 = 12$

$8x = 16$

$x = 2$

$y = 3(2) - 2$

$y = 4$

$(2, 4)$

—or—

elimination

$(3x - y = 2)2$

$2x + 2y = 12$

$6x - 2y = 4$

$8x = 16$

$x = 2$

$3(2) - y = 2$

$6 - y = 2$

$-y = -4$

$y = 4$

$(2, 4)$

#12. Find the center and radius of the circle: $(x-4)^2 + (y+3)^2 = 81$

$(x-h)^2 + (y-k)^2 = r^2$

Center: $(4, -3)$

radius: 9

#13. Write an equation for a circle with radius of $\overset{r}{4}$ and center at $(\overset{h}{3}, \overset{k}{-4})$

$(x-h)^2 + (y-k)^2 = r^2$

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

$(x-3)^2 + (y+4)^2 = 16$

#14. Write an equation for a circle with center at (4,-1) passing through the point (4, 2)

$(x-4)^2 + (y+1)^2 = r^2$

plug in (4,2) to find r: $(4-4)^2 + (2+1)^2 = r^2$

$0 + 3^2 = r^2$

$9 = r^2$

rewrite with r^2: $(x-4)^2 + (y+1)^2 = 9$

Geometry
Ch 13 Review Worksheet

Name_____
Period_____

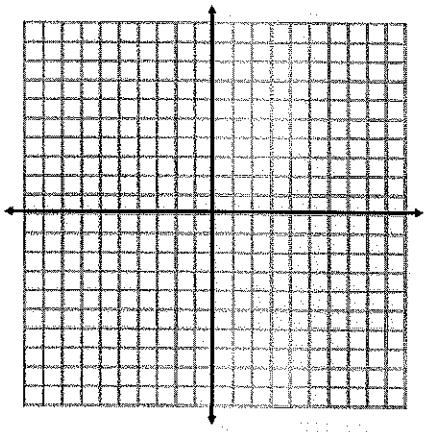
For problems 1 and 2, find the slope and y-intercept of the line.

#1. $y = -5x + 2$

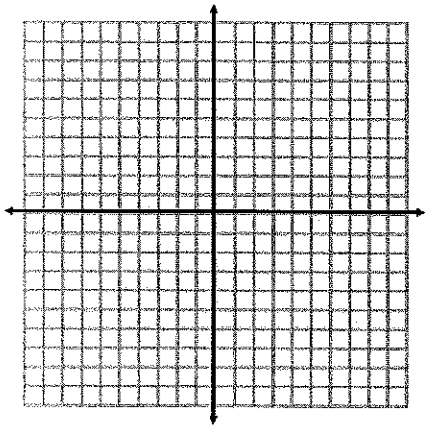
#2. $18x + 3y = 3$

For problems 3 – 6, graph the line.

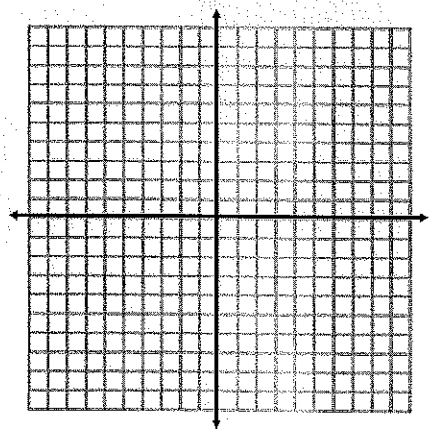
#3. $y = 2x - 4$



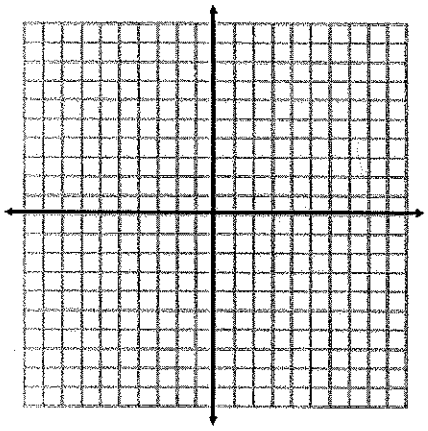
#4. $9x + 3y = 18$



#5. $y = 2$



#6. $x = -5$



#7. Is the point (-1, 6) on the graph of $y = -2x + 3$?

For problems 8 – 10, say whether the pair of lines are parallel, perpendicular, or intersecting.

#8. $y = 2x + 4$
$y = -\frac{1}{2}x + 3$

#9. $y = -4x + 2$
$y = 3x + 2$

#10. $y = x - 7$
$y = x + 1$

#11. Solve the system of equations using substitution or elimination.

$$\begin{cases} 3x - y = 2 \\ 2x + 2y = 12 \end{cases}$$

#12. Find the center and radius of the circle: $(x-4)^2 + (y+3)^2 = 81$

#13. Write an equation for a circle with radius of 4 and center at (3, -4)

#14. Write an equation for a circle with center at (4,-1) passing through the point (4, 2)