

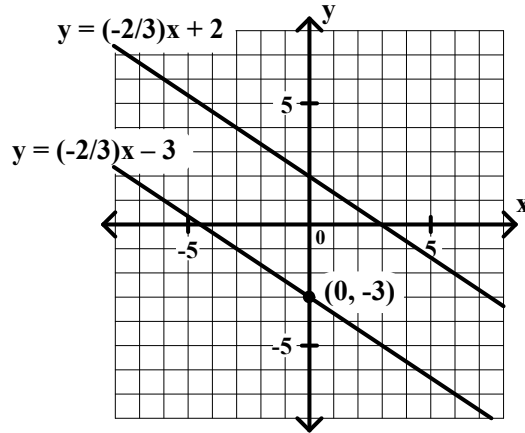
General Algebra II Worksheet #5 Unit 2 Selected Solutions

Find the equation of the line being described in each problem. If the line is oblique, then write its slope-intercept form. Graph both equations.

1. The line through $(0, -3)$ that is parallel to $2x + 3y = 6$

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

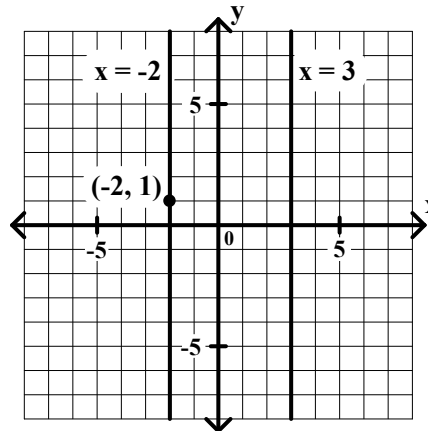
given line
 $2x + 3y = 6$
 $3y = -2x + 6$
 $y = (-2/3)x + 2$
 slope = $-2/3$
 parallel lines
 new line
 $m = -2/3$
 $b = -3$
 $y = mx + b$
 $y = (-2/3)x - 3$



3. The line through $(-2, 1)$ that is parallel to $x = 3$

$x = -2$

given line
 $x = 3$
 vertical line
 slope = $-2/3$
 parallel lines
 new line
 vertical line
 $x = k$
 $(-2, 1)$
 $x = -2$



12. The line through $(4, 3)$ that is perpendicular to $x - 2y = 8$

$y = -2x + 11$

given line
 $x - 2y = 8$
 $-2y = -x + 8$
 $y = (1/2)x - 4$
 slope = $1/2$
 perpendicular lines
 new line
 $m = -2$
 $(4, 3)$
 $y - 3 = -2(x - 4)$
 $y - 3 = -2x + 8$
 $y = -2x + 11$

