Algebra 1 ECA Remediation Name Answer Key

Homework 17.2

Solve each system by substitution.

1) $3x - 3y = 15$
$y = 5x - 1$

$3x - 3(5x-1) = 15$
$3x - 15x + 3 = 15$
$-12x + 3 = 15$
$-3 \quad -3$
$\frac{-12x}{-12} = \frac{12}{-12}$
$x = -1$
$y = 5(-1) - 1$
$y = -5 - 1$
$y = -6$
$(-1, -6)$

2) $y = 7x$
$-4x + 5y = 0$

$-4x + 5(7x) = 0$
$-4x + 35x = 0$
$\frac{31x}{31} = \frac{0}{31}$
$x = 0$
$y = 7(0)$
$y = 0$
$(0, 0)$

3) $y = x - 8$
$4x + 5y = -13$

$4x + 5(x-8) = -13$
$4x + 5x - 40 = -13$
$9x - 40 = -13$
$+40 \quad +40$
$\frac{9x}{9} = \frac{27}{9}$
$x = 3$
$y = 3 - 8$
$y = -5$
$(3, -5)$

4) $6x - y = -15$
$y = x$

$6x - (x) = -15$
$\frac{5x}{5} = \frac{-15}{5}$
$x = -3$
$y = x$
$y = -3$
$(-3, -3)$

5) $-3x - 5y = 24$
$y = -3x$

$-3x - 5(-3x) = 24$
$-3x + 15x = 24$
$\frac{12x}{12} = \frac{24}{12}$
$x = 2$
$y = -3x$
$y = -3(2)$
$y = -6$
$(2, -6)$

6) $y = -4x - 7$
$2x - 4y = 10$

$2x - 4(-4x - 7) = 10$
$2x + 16x + 28 = 10$
$18x + 28 = 10$
$-28 \quad -28$
$\frac{18x}{18} = \frac{-18}{18}$
$x = -1$
$y = -4(-1) - 7$
$y = 4 - 7$
$y = -3$
$(-1, -3)$

Write the slope-intercept form of the equation of the line through the given points.

7) through: $(-5, -4)$ and $(0, 0)$

$m = \frac{-4 - 0}{-5 - 0} = \frac{+4}{+5}$

$5(y + +4) = \frac{4}{5}(x + +5)(5)$

$5y + 20 = 4x + 20$
$-20 \quad -20$
$\frac{5y}{5} = \frac{4x}{5}$

$y = \frac{4}{5}x + 0$

8) through: $(3, -2)$ and $(-5, 0)$

$m = \frac{-2 - 0}{3 + +5} = \frac{-2}{8} = \frac{-1}{4}$

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

$4y + 8 = -x + 3$
$-8 \quad -8$
$\frac{4y}{4} = \frac{-x}{4} - \frac{5}{4}$
$y = \frac{-1}{4}x - \frac{5}{4}$

Answers to Homework 17.2

1) $(-1, -6)$
2) $(0, 0)$
3) $(3, -5)$
4) $(-3, -3)$
5) $(2, -6)$
6) $(-1, -3)$
7) $y = \frac{4}{5}x$
8) $y = -\frac{1}{4}x - \frac{5}{4}$