Algebra 1 ECA Remediation Name Answer Key

Homework 16.1

Solve each system by elimination.

1) $8x + 7y = 2$ ①
$-8x - 5y = -22$ ②

$\frac{2y}{2} = \frac{-20}{2}$

$y = -10$

① $8x + 7(-10) = 2$
$8x - 70 = 2$
$+70 \quad +70$
$\frac{8x}{8} = \frac{72}{8}$
$x = 9$

$\boxed{(9, -10)}$

2) $-4x - y = -6$ ①
$4x + 9y = 22$ ②

$\frac{8y}{8} = \frac{16}{8}$

$y = 2$

① $-4x - (2) = -6$
$-4x - 2 = -6$
$+2 \quad +2$
$\frac{-4x}{-4} = \frac{-4}{-4}$
$x = 1$

$\boxed{(1, 2)}$

3) $4x - 8y = 4$ ①
$8x + 4y = 8$ ② $\cdot (2)$

$4x - 8y = 4$ ①
$16x + 8y = 16$ ②

$\frac{20x}{20} = \frac{20}{20}$

$x = 1$

$\boxed{(1, 0)}$

① $4(1) - 8y = 4$
$4 - 8y = 4$
$-4 \quad -4$
$\frac{-8y}{-8} = \frac{0}{-8}$
$y = 0$

4) $6x - 4y = 0$ ① $\cdot (5)$
$10x + 10y = 0$ ② $\cdot (2)$

$30x - 20y = 0$ ①
$20x + 20y = 0$ ②

$\frac{50x}{50} = \frac{0}{50}$

$x = 0$

$\boxed{(0, 0)}$

① $6(0) - 4y = 0$
$0 - 4y = 0$
$\frac{-4y}{-4} = \frac{0}{-4}$
$y = 0$

5) $-3x = -11 - 8y$ ①
$19 = -x - 3y$ ②

$-3x = -11 - 8y$ ①
$+8y \quad +8y$

$-3x + 8y = -11$ ①
$x + 3y = -19$ ② $\cdot (3)$

$-3x + 8y = -11$ ①
$3x + 9y = -57$ ②

$17y = -68$

$y = -4$

$19 = -x - 3y$
$+x \quad +x$

$x + 19 = -3y$
$+3y \quad +3y$

$x + 3y + 19 = 0$
$-19 \quad -19$

$x + 3y = -19$ ②

$x + 3(-4) = -19$
$x - 12 = -19$
$+12 \quad +12$

$x = -7$

$\boxed{(-7, -4)}$

6) $3x = -12 + 21y$ ①
$4x + 8y = 20$ ②

$3x = -12 + 21y$
$-21y \quad -21y$

$3x - 21y = -12$ ① $\cdot (4)$
$4x + 8y = 20$ ② $\cdot (-3)$

$12x - 84y = -48$
$-12x - 24y = -60$

$\frac{-108y}{-108} = \frac{-108}{-108}$

$y = 1$

$3x - 21y = -12$
$3x - 21(1) = -12$
$3x - 21 = -12$
$+21 \quad +21$

$\frac{3x}{3} = \frac{9}{3}$

$x = 3$

$(3, 1)$

Find the slope of the line through each pair of points.

7) $(-15, 7), (-20, -15)$

$m = \frac{7 + +15}{-15 + +20} = \frac{22}{5}$

8) $(13, -5), (13, 11)$

$m = \frac{-5 - 11}{13 - 13} = \frac{-16}{0}$

$=$ undefined

Answers to Homework 16.1

1) $(9, -10)$
2) $(1, 2)$
3) $(1, 0)$
4) $(0, 0)$
5) $(-7, -4)$
6) $(3, 1)$
7) $\frac{22}{5}$
8) Undefined