

Assignment: Simultaneous Equation

Solve each system by substitution.

1) $y = 7x - 5$
 $y = 3x - 5$

2) $y = 2x - 11$
 $y = -7$

3) $-x - y = -6$
 $y = 7x + 14$

4) $y = -5$
 $2x + 2y = -20$

5) $3x - 5y = -9$
 $x - y = 1$

6) $4x + y = 5$
 $-5x - y = -5$

Solve each system by elimination.

7) $-x - 9y = 20$
 $6x + 18y = -12$

8) $4x - 10y = 22$
 $2x - 8y = 20$

9) $6x + 2y = 18$
 $-3x - 4y = 9$

10) $-12x + 2y = -26$
 $-6x + y = -13$

11) $-2x - 4y = 2$
 $7x - 9y = -7$

12) $48x - 6y = -9$
 $-56x + 7y = 7$

Solve each system by graphing.

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

14) $y = x - 4$
 $y = -2x + 2$

15) $x + y = -3$
 $x + y = 4$

16) $3x + 2y = 4$
 $x + 4y = -12$

- 17) A boat traveled 189 miles each way downstream and back. The trip downstream took 9 hours. The trip back took 63 hours. What is the speed of the boat in still water? What is the speed of the current?
- 18) Matt and Amy each improved their yards by planting daylilies and ivy. They bought their supplies from the same store. Matt spent \$66 on 12 daylilies and 3 pots of ivy. Amy spent \$108 on 6 daylilies and 9 pots of ivy. What is the cost of one daylily and the cost of one pot of ivy?
- 19) The senior classes at High School A and High School B planned separate trips to the indoor climbing gym. The senior class at High School A rented and filled 6 vans and 11 buses with 515 students. High School B rented and filled 9 vans and 13 buses with 622 students. Every van had the same number of students in it as did the buses. How many students can a van carry? How many students can a bus carry?
- 20) Ming's school is selling tickets to the annual talent show. On the first day of ticket sales the school sold 6 adult tickets and 5 student tickets for a total of \$74. The school took in \$48 on the second day by selling 7 adult tickets and 2 student tickets. What is the price each of one adult ticket and one student ticket?

Answers to Assignment: Simultaneous Equation

- 1) $(0, -5)$
- 2) $(2, -7)$
- 3) $(-1, 7)$
- 4) $(-5, -5)$
- 5) $(7, 6)$
- 6) $(0, 5)$
- 7) $(7, -3)$
- 8) $(-2, -3)$
- 9) $(5, -6)$
- 10) Infinite number of solutions
- 11) $(-1, 0)$
- 12) No solution
- 13) $(-4, -3)$
- 14) $(2, -2)$
- 15) No solution
- 16) $(4, -4)$
- 17) boat: 12 mph, current: 9 mph
- 18) daylily: \$3, pot of ivy: \$10
- 19) Van: 7, Bus: 43
- 20) adult ticket: \$4, student ticket: \$10

