**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_**

**Solving Systems of Equation by Substitution**

**Worksheet 411**

**Use substitution to solve each system of equations.**

**1.**  *y* = 4*x* **2.** *y* = 2*x* **3.** *y* = 3*x*

 *x* + *y* = 5 *x* + 3*y* = –14 2*x* + *y* = 15

**4.** *x* = –4*y* **5.** *y* = *x* – 1 **6.** *x* = *y* – 7

 3*x* + 2*y* = 20 *x* + *y* = 3 *x* + 8*y* = 2

**7.** *y* = 4*x* – 1 **8.** *y* = 3*x* + 8 **9.** 2*x* – 3*y* = 21

 *y* = 2*x* – 5 5*x* + 2*y* = 5 *y* = 3 – *x*

**10.** *y* = 5*x* – 8 **11.** *x* + 2*y* = 13 **12.** 3*x* – *y* = 4

 4*x* + 3*y* = 33 3*x* – 5*y* = 6 2*x* – 10*y* = 20

**13.** *x* + 4*y* = 8 **14.** 5*x* – 2*y* = 14 **15.** 2*x* + 5*y* = 38

 2*x* – 5*y* = 29 2*x* – *y* = 5 *x* – 2*y* = –1

**16.** *x* – 4*y* = 27 **17.** 2*x* + 2*y* = 7 **18.** 2.5*x* + *y* = –2

 3*x* + *y* = –23 *x* – 2*y* = –1 3*x* + 2*y* = 0

**MOVIE TICKETS For exercises 22 and 23, use the following information.**

Tickets to a movie cost $7.25 for adults and $5.50 for students. A group of friends purchased 8 tickets for $52.75.

**22.** Write and equation to represent the situation.

**23.** How many adult tickets and students tickets were purchased?