Mathematical Physics — PHZ 3113 Classwork 13 (April 10, 2013) Linear Equations

After finding solutions: Check that they are correct!

1. Find all solutions of the equations

$$x + 2y = 3, \qquad (1)$$

$$3x + y = 2. (2)$$

2. Find all solutions of the equations

$$x + 2y = 3, \qquad (3)$$

$$2x + 4y = 6. (4)$$

3. Find all solutions of the equations

$$x + 2y = 3, \qquad (5)$$

$$2x + 4y = 4$$
. (6)

4. Find all solutions of the equations

$$x + 2y = 0,$$
 (7)  
 $3x + y = 0.$  (8)

5. Find all solutions of the equations

$$\begin{aligned}
 x + 2y &= 0, \\
 2x + 4y &= 0. \end{aligned}
 \tag{9}$$

6. Find all solutions of the equations

$$x + 2y + z = 0, \qquad (11)$$

$$2x + 4y + z = 0, (12)$$

$$x + y + 2z = 0. (13)$$

7. Find all solutions of the equations

$$x + 2y + z = 0, \qquad (14)$$

$$2x + 4y + 2z = 0, \qquad (15)$$

$$x + y + 2z = 0. (16)$$