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

$$
\begin{align*}
& x+2 y=3  \tag{1}\\
& 3 x+y=2 \tag{2}
\end{align*}
$$

2. Find all solutions of the equations

$$
\begin{array}{r}
x+2 y=3 \\
2 x+4 y=6 . \tag{4}
\end{array}
$$

3. Find all solutions of the equations

$$
\begin{align*}
x+2 y & =3  \tag{5}\\
2 x+4 y & =4 . \tag{6}
\end{align*}
$$

4. Find all solutions of the equations

$$
\begin{align*}
& x+2 y=0  \tag{7}\\
& 3 x+y=0 \tag{8}
\end{align*}
$$

5. Find all solutions of the equations

$$
\begin{align*}
x+2 y & =0  \tag{9}\\
2 x+4 y & =0 . \tag{10}
\end{align*}
$$

6. Find all solutions of the equations

$$
\begin{align*}
x+2 y+z & =0  \tag{11}\\
2 x+4 y+z & =0  \tag{12}\\
x+y+2 z & =0 \tag{13}
\end{align*}
$$

7. Find all solutions of the equations

$$
\begin{align*}
x+2 y+z & =0  \tag{14}\\
2 x+4 y+2 z & =0  \tag{15}\\
x+y+2 z & =0 \tag{16}
\end{align*}
$$

