**Aufgabe 5.31**

Ermitteln Sie die komplexe Zahl $z$, für die $\dfrac{1+3i}{25}z + \dfrac{2-3i}{1+2i} = -\dfrac{7i}{5}$ gilt!

**Lösung:**

$$\frac{1+3i}{25}z = -\frac{7i}{5} - \frac{(2-3i)(1-2i)}{(1+2i)(1-2i)} = -\frac{7i}{5} - \frac{2-3i-4i-6}{5} = -\frac{7i}{5} - \frac{4-7i}{5} = \frac{4}{5}$$

$$z = \frac{25}{1+3i}\frac{4}{5} = \frac{20(1-3i)}{(1+3i)(1-3i)} = \frac{20-60i}{10} = \underline{\underline{2-6i}}$$