

Benchmark Review

Solve:

① $(x+3)(x+2) = 0$

$$\begin{array}{r} x+3=0 \\ -3 \quad -3 \end{array} \quad \begin{array}{r} x+2=0 \\ -2 \quad -2 \end{array}$$

$$\boxed{x = -3 \quad x = -2}$$

② $(3x+7)(2x+1) = 0$

$$\begin{array}{r} 3x+7=0 \\ -7 \quad -7 \\ \hline 3x = -7 \\ \hline x = -\frac{7}{3} \end{array} \quad \begin{array}{r} 2x+1=0 \\ -1 \quad -1 \\ \hline 2x = -1 \\ \hline x = -\frac{1}{2} \end{array}$$

$$\boxed{x = -\frac{7}{3} \quad x = -\frac{1}{2}}$$

③ $4x^2 - 9 = 0$

$$(2x+3)(2x-3) = 0$$

$$\boxed{x = -\frac{3}{2} \quad x = \frac{3}{2}}$$

④ $x^2 + 7x - 18 = 0$

$$\begin{array}{r} -18 \\ \hline \frac{9}{x} \quad \frac{-2}{x} \\ \hline 7 \end{array} \quad (x+9)(x-2) = 0$$
$$\boxed{-9, 2}$$

⑤ $\frac{9x^2}{9x} + \frac{63x}{9x} = 0$

$$\underline{9x(x+7) = 0}$$

$$\frac{9x}{9} = \frac{0}{9} \quad \begin{array}{r} x+7=0 \\ -7 \quad -7 \end{array}$$

$$\boxed{x = 0 \quad x = -7}$$