Review: Solving Quadratics
Method 1: (Factoring) Trinomial Recoup.
(1) b)

$$
\begin{array}{lr}
\text { b) } 3 x^{2}+7 x+\frac{2}{2}=0 & 1 \times 6=6 \\
\left(3 x^{2}+1 x\right)(+6 x+2)=0 & 1+\underline{6}=7 \\
x(3 x+1)+2(3 x+1)=0 & 1 \times 6 \\
(3 x+1)(x+2)=0 & 2 x^{3} \\
3 x+1=0 & x+2=0 \\
3 x=-1 & x=-2 \\
x=-\frac{1}{3} &
\end{array}
$$

Method $2^{\text {: }}$. Completing the Square:
(1) b)

$$
\begin{aligned}
& 3 x^{2}+7 x+2=0 \\
& \frac{3 x^{2}}{3}+\frac{7 x}{3}=-\frac{2}{3} \\
& x^{2}+\frac{7 x}{3}=-\frac{2}{3} \\
& \begin{array}{l}
x^{2}+\frac{7}{3} x+\frac{49}{36}=-\frac{2}{3}+\frac{49}{36} \begin{array}{c}
\frac{7}{3} \times \frac{1}{2}=\left(\frac{7}{6}\right)^{2} \\
=\frac{49}{36}
\end{array} \\
(x+7)^{2}=-\frac{24}{36}+\frac{49}{36}
\end{array} \\
& \left(x+\frac{7}{6}\right)^{2}=\frac{25}{36} \quad \begin{array}{c}
\text { Square Root } \\
\text { both sides }
\end{array} \\
& \text { both sides } \\
& x+\frac{7}{6}= \pm \sqrt{\frac{25}{36}} \\
& x+\left(\frac{7}{6}\right)= \pm \frac{5}{6} \\
& x=\frac{-7}{6} \pm \frac{5}{6} \\
& x=-\frac{7}{6}-\frac{5}{6} \\
& x=-\frac{7}{6}+\frac{5}{6} \\
& x=\frac{-12}{6} \\
& x=-2 \\
& x=\frac{-2}{6} \\
& x=-\frac{1}{3}
\end{aligned}
$$

