

$$Pg \ 346: 7-15$$

$$15) \ 2x^2 + 3x - 1 = 0$$

$$x = \frac{-3 \pm \sqrt{9 - 4(2)(-1)}}{4} = \boxed{\frac{-3 \pm \sqrt{17}}{4}}$$

$$7) \ 6x^2 + 7x - 5 = 0$$

$$\begin{aligned} x &= \frac{-7 \pm \sqrt{49 - 4(6)(-5)}}{12} \\ &= \frac{-7 \pm \sqrt{49 + 120}}{12} = \frac{-7 \pm \sqrt{169}}{12} \\ &= \frac{-7 \pm 13}{12} = \boxed{\frac{-5}{3}, \frac{1}{2}} \end{aligned}$$

$$8) \ 3x^2 - 3x - 1 = 0$$

$$x = \frac{3 \pm \sqrt{9 - 4(3)(-1)}}{6} = \boxed{\frac{3 \pm \sqrt{21}}{6}}$$

$$9) \ 6x^2 = 130$$

$$\begin{aligned} x^2 &= \frac{130}{6} \rightarrow x = \pm \sqrt{\frac{130}{6}} = \pm \frac{\sqrt{780}}{6} \\ &= \pm \frac{2\sqrt{195}}{6} = \boxed{\pm \frac{\sqrt{195}}{3}} \end{aligned}$$

$$10) \ x^2 + 6x + 9 = 0$$

$$x = \frac{-6 \pm \sqrt{36 - 4(9)}}{2} = \boxed{-3}$$

$$11) \ 5x^2 - 4x - 33 = 0$$

$$\begin{aligned} x &= \frac{4 \pm \sqrt{16 - 4(5)(-33)}}{10} = \frac{4 \pm \sqrt{676}}{10} \\ x &= \frac{4 \pm 26}{10} = \frac{2 \pm 13}{5} = \boxed{3, -\frac{11}{5}} \end{aligned}$$

$$12) \ 3x^2 - 6x - 4 = 0$$

$$\begin{aligned} x &= \frac{6 \pm \sqrt{36 - 4(3)(-4)}}{6} = \frac{6 \pm \sqrt{84}}{6} \\ x &= \frac{6 \pm 2\sqrt{21}}{6} = \boxed{\frac{3 \pm \sqrt{21}}{3}} \end{aligned}$$

$$13) \ 9x^2 - 5x = 0$$

$$\begin{aligned} x(9x - 5) &= 0 \\ x &= \boxed{0, \frac{5}{9}} \end{aligned}$$

$$14) \ 7x^2 = 13$$

$$\begin{aligned} x^2 &= \frac{13}{7} \\ x &= \pm \sqrt{\frac{13}{7}} = \pm \frac{\sqrt{91}}{7} \end{aligned}$$