

$$42. \quad 2x^2 - x = 28$$

$$2\left(x^2 - \frac{1}{2}x + \frac{1}{16}\right) = \frac{28}{2} + \frac{1}{8}$$

$$\frac{1}{2} \cdot 2\left(x - \frac{1}{4}\right)^2 = \frac{225}{8} \cdot \frac{1}{2}$$

$$\sqrt{\left(x - \frac{1}{4}\right)^2} = \pm \sqrt{\frac{225}{16}}$$

$$x - \frac{1}{4} = \pm \frac{15}{4}$$

$$x = \frac{1}{4} \pm \frac{15}{4}$$

$$x = \frac{1}{4} + \frac{15}{4} = \frac{16}{4} = 4$$

$$x = \frac{1}{4} - \frac{15}{4} = \frac{-14}{4} = -\frac{7}{2}$$

$$43. \quad 2x^2 - 5x = 3$$

$$2\left(x^2 - \frac{5}{2}x + \frac{25}{16}\right) = \frac{3}{2} + \frac{25}{8}$$

$$\frac{1}{2} \cdot 2\left(x - \frac{5}{4}\right)^2 = \frac{49}{8} \cdot \frac{1}{2}$$

$$\sqrt{\left(x - \frac{5}{4}\right)^2} = \pm \sqrt{\frac{49}{16}}$$

$$x - \frac{5}{4} = \pm \frac{7}{4} \quad x = \frac{5}{4} \pm \frac{7}{4}$$

$$x = \frac{12}{4} = 3 \quad x = \frac{-2}{4} = -\frac{1}{2}$$

$$44. \quad 4x^2 + 2x = 12$$

$$4\left(x^2 + \frac{1}{2}x + \frac{1}{16}\right) = \frac{12}{4} + \frac{1}{4}$$

$$\frac{1}{4} \cdot 4\left(x + \frac{1}{4}\right)^2 = \frac{49}{4} \cdot \frac{1}{4}$$

$$\sqrt{\left(x + \frac{1}{4}\right)^2} = \pm \sqrt{\frac{49}{16}}$$

$$x + \frac{1}{4} = \pm \frac{7}{4}$$

$$x = \frac{7}{4} - \frac{1}{4} = \frac{6}{4} = \frac{3}{2}$$

$$x = \frac{-7}{4} - \frac{1}{4} = \frac{-8}{4} = -2$$

$$45. \quad 10x^2 + 3x = 4$$

$$10\left(x^2 + \frac{3}{10}x + \frac{9}{400}\right) = \frac{4}{10} + \frac{9}{40}$$

$$\frac{1}{10} \cdot 10\left(x + \frac{3}{20}\right)^2 = \frac{169}{40} \cdot \frac{1}{10}$$

$$\sqrt{\left(x + \frac{3}{20}\right)^2} = \pm \sqrt{\frac{169}{400}}$$

$$x + \frac{3}{20} = \pm \frac{13}{20}$$

$$x = \frac{-3}{20} \pm \frac{13}{20} \begin{cases} \frac{10}{20} = \frac{1}{2} \\ \frac{-16}{20} = -\frac{4}{5} \end{cases}$$