二次方程式　すべて　**1**

３年　　組　　番・氏名

◆次の二次方程式を解け。

① $3x^2 = 27$ $x^2 = 9$ $x = \pm 3$	② $(x-2)^2 = 7$ $x - 2 = \pm\sqrt{7}$ $x = 2 \pm \sqrt{7}$
③ $x^2 - 8x + 16 = 0$ $(x-4)^2 = 0$ $x = 4$	④ $x^2 - 3x - 18 = 0$ $(x-6)(x+3) = 0$ $x = 6, -3$
⑤ $x^2 - 36 = 0$ $(x+6)(x-6) = 0$ $x = \pm 6$	⑥ $x^2 - x - 72 = 0$ $(x+8)(x-9) = 0$ $x = -8, 9$
⑦ $x^2 + 5x + 2 = 0$ $x = \dfrac{-5 \pm \sqrt{5^2 - 4\times1\times2}}{2\times1}$ $= \dfrac{-5 \pm \sqrt{25-8}}{2} = \dfrac{-5 \pm \sqrt{17}}{2}$	⑧ $3x^2 - 9x + 2 = 0$ $x = \dfrac{-(-9) \pm \sqrt{(-9)^2 - 4\times3\times2}}{2\times3}$ $= \dfrac{9 \pm \sqrt{81-24}}{6} = \dfrac{9 \pm \sqrt{57}}{6}$
⑨ $x^2 + 8x + 5 = 0$ $x = \dfrac{-8 \pm \sqrt{8^2 - 4\times1\times5}}{2\times1} = \dfrac{-8 \pm \sqrt{64-20}}{2}$ $= \dfrac{-8 \pm \sqrt{44}}{2} = \dfrac{-8 \pm 2\sqrt{11}}{2}$ $= -4 \pm \sqrt{11}$	⑩ $5x^2 + 3x - 2 = 0$ $x = \dfrac{-3 \pm \sqrt{3^2 - 4\times5\times(-2)}}{2\times5} = \dfrac{-3 \pm \sqrt{9+40}}{10}$ $= \dfrac{-3 \pm \sqrt{49}}{10} = \dfrac{-3 \pm 7}{10}$ $x = \dfrac{4}{10}, -\dfrac{10}{10} \qquad x = \dfrac{2}{5}, -1$

二次方程式　すべて　**2**

３年　　組　　番・氏名

◆次の二次方程式を解け。

① $2x^2 - 32 = 0$ $2x^2 = 32$ $x^2 = 16$ $x = \pm 4$	② $(x+3)^2 = 25$ $x + 3 = \pm 5$ $x = -3 \pm 5$ $x = 2, -8$
③ $x^2 - 4x - 45 = 0$ $(x-9)(x+5) = 0$ $x = 9, -5$	④ $x^2 + 18x + 81 = 0$ $(x+9)^2 = 0$ $x = -9$
⑤ $x^2 - 25 = 0$ $(x+5)(x-5) = 0$ $x = \pm 5$	⑥ $x^2 - 9x + 20 = 0$ $(x-4)(x-5) = 0$ $x = 4, 5$
⑦ $x^2 - 3x - 2 = 0$ $x = \dfrac{-(-3) \pm \sqrt{(-3)^2 - 4\times1\times(-2)}}{2\times1}$ $= \dfrac{3 \pm \sqrt{9+8}}{2} = \dfrac{3 \pm \sqrt{17}}{2}$	⑧ $2x^2 + 5x - 1 = 0$ $x = \dfrac{-5 \pm \sqrt{5^2 - 4\times2\times(-1)}}{2\times2}$ $= \dfrac{-5 \pm \sqrt{25+8}}{4} = \dfrac{-5 \pm \sqrt{33}}{4}$
⑨ $x^2 + 4x - 3 = 0$ $x = \dfrac{-4 \pm \sqrt{4^2 - 4\times1\times(-3)}}{2\times1} = \dfrac{-4 \pm \sqrt{16+12}}{2}$ $= \dfrac{-4 \pm \sqrt{28}}{2} = \dfrac{-4 \pm 2\sqrt{7}}{2}$ $= -2 \pm \sqrt{7}$	⑩ $6x^2 + x - 2 = 0$ $x = \dfrac{-1 \pm \sqrt{1^2 - 4\times6\times(-2)}}{2\times6} = \dfrac{-1 \pm \sqrt{1+48}}{12}$ $= \dfrac{-1 \pm \sqrt{49}}{12} = \dfrac{-1 \pm 7}{12}$ $x = \dfrac{6}{12}, -\dfrac{8}{12} \qquad x = \dfrac{1}{2}, -\dfrac{2}{3}$