2次方程式

年　　組　名前

■ 次の方程式を解きなさい。

① $9x^2 - x - 1 = 0$

② $x^2 - 6x + 5 = 0$

③ $x^2 - 49 = 0$

④ $4x^2 - 12x + 9 = 0$

⑤ $x^2 + 8x - 20 = 0$

⑥ $2x^2 + 5x - 3 = 0$

⑦ $x^2 + 8x + 16 = 0$

⑧ $x^2 - 6x = 0$

⑨ $x^2 + 5x - 3 = 0$

⑩ $9x^2 + 12x + 4 = 0$

⑪ $x^2 - 2x - 9 = 0$

⑫ $x^2 + 5x = 0$

⑬ $x^2 - 13x - 30 = 0$

⑭ $25x^2 - 20x + 4 = 0$

⑮ $3x^2 - 8x + 5 = 0$

⑯ $x^2 + 3x - 40 = 0$

⑰ $x^2 + 3x - 18 = 0$

⑱ $3x^2 + 4x + 1 = 0$

⑲ $x^2 - 14x + 48 = 0$

⑳ $x^2 + x - 72 = 0$

㉑ $2x^2 + x - 6 = 0$

2次方程式

■ 次の方程式を解きなさい。

① $9x^2 - x - 1 = 0$

$$x = \frac{1 \pm \sqrt{37}}{18}$$

② $x^2 - 6x + 5 = 0$

$(x-1)(x-5) = 0$

$x = 1, 5$

③ $x^2 - 49 = 0$

$(x+7)(x-7) = 0$

$x = \pm 7$

④ $4x^2 - 12x + 9 = 0$

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

$$x = \frac{3}{2}$$

⑤ $x^2 + 8x - 20 = 0$

$(x-2)(x+10) = 0$

$x = 2, -10$

⑥ $2x^2 + 5x - 3 = 0$

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

$$= \frac{1}{2}, -3$$

⑦ $x^2 + 8x + 16 = 0$

$(x+4)^2 = 0$

$x = -4$

⑧ $x^2 - 6x = 0$

$x(x-6) = 0$

$x = 0, 6$

⑨ $x^2 + 5x - 3 = 0$

$$x = \frac{-5 \pm \sqrt{37}}{2}$$

⑩ $9x^2 + 12x + 4 = 0$

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

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

⑪ $x^2 - 2x - 9 = 0$

$$x = 1 \pm \sqrt{10}$$

⑫ $x^2 + 5x = 0$

$x(x+5) = 0$

$x = 0, -5$

⑬ $x^2 - 13x - 30 = 0$

$(x+2)(x-15) = 0$

$x = -2, 15$

⑭ $25x^2 - 20x + 4 = 0$

$(5x-2)^2 = 0$

$$x = \frac{2}{5}$$

⑮ $3x^2 - 8x + 5 = 0$

$$x = \frac{4 \pm 1}{3}$$

$$= \frac{5}{3}, 1$$

⑯ $x^2 + 3x - 40 = 0$

$(x-5)(x+8) = 0$

$x = 5, -8$

⑰ $x^2 + 3x - 18 = 0$

$(x-3)(x+6) = 0$

$x = 3, -6$

⑱ $3x^2 + 4x + 1 = 0$

$$x = \frac{-2 \pm 1}{3}$$

$$= \frac{1}{3}, -1$$

⑲ $x^2 - 14x + 48 = 0$

$(x-6)(x-8) = 0$

$x = 6, 8$

⑳ $x^2 + x - 72 = 0$

$(x-8)(x+9) = 0$

$x = 8, -9$

㉑ $2x^2 + x - 6 = 0$

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

$$= \frac{3}{2}, -2$$