

得 点		<b>演習問題</b>	実施 日	月	日	氏 名	

【1】 次の方程式を解きなさい。

①  $x^2 + 3x = 0$

②  $x^2 + 6x + 8 = 0$

③  $x^2 + x - 30 = 0$

④  $x^2 - 36 = 0$

⑤  $4x^2 - 9 = 0$

⑥  $x^2 + 16x + 64 = 0$

⑦  $3x^2 + 10x = 2x^2 - 5x - 56$

⑧  $(x-3)^2 = 2(x-1) - 1$

⑨  $3(x^2 - 8) = (x+2)(x-8)$

⑩  $(3x+2)^2 = (x+4)(x+8)$

【2】 次の方程式を解きなさい。

①  $x^2 + 5x + 3 = 0$

②  $4x^2 + 7x + 2 = 0$

③  $x^2 + 10x + 7 = 0$

④  $2x^2 - 4x - 5 = 0$

⑤  $2x^2 - 3x - 2 = 0$

⑥  $2x^2 + 7x + 3 = 0$

⑦  $3x^2 + x - 10 = 0$

⑧  $4x^2 + 9 = 15x$

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【1】次の方程式を解きなさい。

- ①  $x^2 + 3x = 0$   $x(x+3) = 0$   
 $x = 0, x = -3$
- ②  $x^2 + 6x + 8 = 0$   $(x+2)(x+4) = 0$   
 $x = -2, x = -4$
- ③  $x^2 + x - 30 = 0$   $(x+6)(x-5) = 0$   
 $x = 5, x = -6$
- ④  $x^2 - 36 = 0$   $(x+6)(x-6) = 0$   
 $x = \pm 6$
- ⑤  $4x^2 - 9 = 0$   $(2x+3)(2x-3) = 0$   
 $x = \pm \frac{3}{2}$
- ⑥  $x^2 + 16x + 64 = 0$   $(x+8)^2 = 0$   
 $x = -8$
- ⑦  $3x^2 + 10x = 2x^2 - 5x - 56$   $x^2 + 15x + 56 = 0$   
 $(x+7)(x+8) = 0$   
 $x = -7, -8$
- ⑧  $(x-3)^2 = 2(x-1) - 1$   $x^2 - 6x + 9 = 2x - 2 - 1$   
 $x^2 - 8x + 12 = 0$   
 $(x-2)(x-6) = 0$   
 $x = 2, 6$
- ⑨  $3(x^2 - 8) = (x+2)(x-8)$   $3x^2 - 24 = x^2 - 6x - 16$   
 $2x^2 + 6x - 8 = 0$   
 $x^2 + 3x - 4 = 0$   
 $(x+4)(x-1) = 0$   
 $x = 1, -4$
- ⑩  $(3x+2)^2 = (x+4)(x+8)$   
 $9x^2 + 12x + 4 = x^2 + 12x + 32$   $x = \pm \sqrt{\frac{7}{2}}$   
 $8x^2 = 28$   
 $x^2 = \frac{7}{2}$   $x = \pm \frac{\sqrt{14}}{2}$

【2】次の方程式を解きなさい。

- ①  $x^2 + 5x + 3 = 0$   $x = \frac{-5 \pm \sqrt{25 - 4 \times 1 \times 3}}{2}$   
 $x = \frac{-5 \pm \sqrt{13}}{2}$
- ②  $4x^2 + 7x + 2 = 0$   $x = \frac{-7 \pm \sqrt{49 - 4 \times 4 \times 2}}{8}$   
 $x = \frac{-7 \pm \sqrt{17}}{8}$
- ③  $x^2 + 10x + 7 = 0$   $x = \frac{-10 \pm \sqrt{100 - 4 \times 1 \times 7}}{2}$   
 $x = \frac{-10 \pm 6\sqrt{2}}{2}$   
 $x = -5 \pm 3\sqrt{2}$
- ④  $2x^2 - 4x - 5 = 0$   $x = \frac{4 \pm \sqrt{16 - 4 \times 2 \times (-5)}}{4}$   
 $x = \frac{4 \pm 2\sqrt{14}}{4}$   
 $x = \frac{2 \pm \sqrt{14}}{2}$
- ⑤  $2x^2 - 3x - 2 = 0$   $x = \frac{3 \pm \sqrt{9 + 4 \times 2 \times 2}}{4}$   
 $x = \frac{3 \pm 5}{4}$   
 $x = 2, -\frac{1}{2}$
- ⑥  $2x^2 + 7x + 3 = 0$   $x = \frac{-7 \pm \sqrt{49 - 4 \times 2 \times 3}}{4}$   
 $x = \frac{-7 \pm 5}{4}$   
 $x = -3, -\frac{1}{2}$
- ⑦  $3x^2 + x - 10 = 0$   $x = \frac{-1 \pm \sqrt{1 + 4 \times 3 \times 10}}{6}$   
 $x = \frac{-1 \pm 11}{6}$   
 $x = -2, \frac{5}{3}$
- ⑧  $4x^2 + 9 = 15x$   $x = \frac{15 \pm \sqrt{225 - 4 \times 4 \times 9}}{8}$   
 $4x^2 - 15x + 9 = 0$   $x = \frac{15 \pm 9}{8}$   
 $x = 3, \frac{3}{4}$