

2次方程式

年 組 名前

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■ 次の方程式を解きなさい。

① $(x-2)^2=3$

$x=$

② $(x-3)^2-21=0$

$x=$

③ $(x+5)^2-17=0$

$x=$

④ $(x-1)^2=34$

$x=$

⑤ $(x-8)^2-49=0$

$x=$

⑥ $(x+1)^2=23$

$x=$

⑦ $(x+6)^2=5$

$x=$

⑧ $(x+2)^2-11=0$

$x=$

⑨ $(x-6)^2-1=0$

$x=$

⑩ $(x+3)^2=28$

$x=$

⑪ $(x+4)^2=63$

$x=$

⑫ $(x+8)^2-31=0$

$x=$

⑬ $(x-9)^2-24=0$

$x=$

⑭ $(x+9)^2=25$

$x=$

⑮ $(x-4)^2-16=0$

$x=$

⑯ $(x-7)^2=44$

$x=$

⑰ $(x+7)^2-32=0$

$x=$

⑱ $(x-5)^2=20$

$x=$

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$$\begin{aligned} \textcircled{1} (x-2)^2 &= 3 \\ x-2 &= \pm\sqrt{3} \end{aligned}$$

$$x = 2 \pm \sqrt{3}$$

$$\begin{aligned} \textcircled{2} (x-3)^2 - 21 &= 0 \\ (x-3)^2 &= 21 \\ x-3 &= \pm\sqrt{21} \end{aligned}$$

$$x = 3 \pm \sqrt{21}$$

$$\begin{aligned} \textcircled{3} (x+5)^2 - 17 &= 0 \\ (x+5)^2 &= 17 \\ x+5 &= \pm\sqrt{17} \end{aligned}$$

$$x = -5 \pm \sqrt{17}$$

$$\begin{aligned} \textcircled{4} (x-1)^2 &= 34 \\ x-1 &= \pm\sqrt{34} \end{aligned}$$

$$x = 1 \pm \sqrt{34}$$

$$\begin{aligned} \textcircled{5} (x-8)^2 - 49 &= 0 \\ (x-8)^2 &= 49 \\ x-8 &= \pm 7 \\ x &= 8 \pm 7 \end{aligned}$$

$$x = 1, 15$$

$$\begin{aligned} \textcircled{6} (x+1)^2 &= 23 \\ x+1 &= \pm\sqrt{23} \end{aligned}$$

$$x = -1 \pm \sqrt{23}$$

$$\begin{aligned} \textcircled{7} (x+6)^2 &= 5 \\ x+6 &= \pm\sqrt{5} \end{aligned}$$

$$x = -6 \pm \sqrt{5}$$

$$\begin{aligned} \textcircled{8} (x+2)^2 - 11 &= 0 \\ (x+2)^2 &= 11 \\ x+2 &= \pm\sqrt{11} \end{aligned}$$

$$x = -2 \pm \sqrt{11}$$

$$\begin{aligned} \textcircled{9} (x-6)^2 - 1 &= 0 \\ (x-6)^2 &= 1 \\ x-6 &= \pm 1 \\ x &= 6 \pm 1 \end{aligned}$$

$$x = 5, 7$$

$$\begin{aligned} \textcircled{10} (x+3)^2 &= 28 \\ x+3 &= \pm 2\sqrt{7} \end{aligned}$$

$$x = -3 \pm 2\sqrt{7}$$

$$\begin{aligned} \textcircled{11} (x+4)^2 &= 63 \\ x+4 &= \pm 3\sqrt{7} \end{aligned}$$

$$x = -4 \pm 3\sqrt{7}$$

$$\begin{aligned} \textcircled{12} (x+8)^2 - 31 &= 0 \\ (x+8)^2 &= 31 \\ x+8 &= \pm\sqrt{31} \end{aligned}$$

$$x = -8 \pm \sqrt{31}$$

$$\begin{aligned} \textcircled{13} (x-9)^2 - 24 &= 0 \\ (x-9)^2 &= 24 \\ x-9 &= \pm 2\sqrt{6} \end{aligned}$$

$$x = 9 \pm 2\sqrt{6}$$

$$\begin{aligned} \textcircled{14} (x+9)^2 &= 25 \\ x+9 &= \pm 5 \\ x &= -9 \pm 5 \end{aligned}$$

$$x = -14, -4$$

$$\begin{aligned} \textcircled{15} (x-4)^2 - 16 &= 0 \\ (x-4)^2 &= 16 \\ x-4 &= \pm 4 \\ x &= 4 \pm 4 \end{aligned}$$

$$x = 0, 8$$

$$\begin{aligned} \textcircled{16} (x-7)^2 &= 44 \\ x-7 &= \pm 2\sqrt{11} \end{aligned}$$

$$x = 7 \pm 2\sqrt{11}$$

$$\begin{aligned} \textcircled{17} (x+7)^2 - 32 &= 0 \\ (x+7)^2 &= 32 \\ x+7 &= \pm 4\sqrt{2} \end{aligned}$$

$$x = -7 \pm 4\sqrt{2}$$

$$\begin{aligned} \textcircled{18} (x-5)^2 &= 20 \\ x-5 &= \pm 2\sqrt{5} \end{aligned}$$

$$x = 5 \pm 2\sqrt{5}$$