

二次方程式 4.

組氏名

1. 次の方程式を解け.

(1) $2(x+2)^2=6$

(2) $3(x+3)^2=18$

$$\begin{aligned} 5(x-3)^2 &= 125 \\ (x-3)^2 &= 25 \\ x-3 &= \pm 5 \\ x &= 3 \pm 5 \\ x &= 3+5, x=3-5 \\ x &= 8, x=-2 \end{aligned}$$

(3) $4(x-1)^2=20$

(4) $2(x+3)^2=98$

(5) $3(x+5)^2=48$

2. 次の方程式を解け.

(1) $3(x+2)^2-18=0$

(2) $4(x+1)^2-20=0$

$$\begin{aligned} 5(x-2)^2-60 &= 0 \\ 5(x-2)^2 &= 60 \\ (x-2)^2 &= 12 \\ x-2 &= \pm\sqrt{12} \\ x &= 2 \pm \sqrt{12} \\ x &= 2 \pm 2\sqrt{3} \end{aligned}$$

(3) $2(x+5)^2-54=0$

(4) $5(x-2)^2-80=0$

(5) $2(x-7)^2-98=0$

3. 次の方程式を解け。(まとめ)

(1) $x^2=16$

(2) $x^2=\frac{16}{25}$

(3) $x^2=6$

(4) $x^2=27$

(5) $x^2-25=0$

(6) $x^2-100=0$

(7) $x^2-18=0$

(8) $x^2-72=0$

(9) $5x^2=45$

(10) $6x^2=150$

(11) $3x^2=21$

(12) $3x^2=54$

(13) $5x^2-20=0$

(14) $2x^2-98=0$

(15) $3x^2-15=0$

(16) $2x^2-64=0$

(17) $(x+2)^2=5$

(18) $(x-1)^2=8$

(19) $(x-3)^2=25$

(20) $(x+4)^2=49$

(21) $(x+2)^2-6=0$

(22) $(x-6)^2-12=0$

(23) $(x-4)^2-36=0$

(24) $(x+10)^2-81=0$

(25) $3(x+6)^2=24$

(26) $5(x+3)^2-18=0$

(27) $4(x-3)^2-108=0$

二次方程式 5.

組氏名 _____

1. 次の〔 〕にあてはまる数を入れよ。

(1) $(x+5)^2 = x^2 + 10x + [\quad]$ (2) $(x+3)^2 = x^2 + 6x + [\quad]$

(3) $(x+2)^2 = x^2 + 4x + [\quad]$ (4) $(x+4)^2 = x^2 + 8x + [\quad]$

(5) $(x-2)^2 = x^2 - 4x + [\quad]$ (6) $(x-6)^2 = x^2 - 12x + [\quad]$

(7) $(x-1)^2 = x^2 - 2x + [\quad]$ (8) $(x-\frac{1}{3})^2 = x^2 - \frac{2}{3}x + [\quad]$

(9) $(x+5)^2 = x^2 + [\quad]x + [\quad]$ (10) $(x+3)^2 = x^2 + [\quad]x + [\quad]$

(11) $(x-2)^2 = x^2 - [\quad]x + [\quad]$ (12) $(x-1)^2 = x^2 - [\quad]x + [\quad]$

(13) $(x+[\quad])^2 = x^2 + 6x + 9$ (14) $(x+[\quad])^2 = x^2 + 4x + 4$

(15) $(x-[\quad])^2 = x^2 - 8x + 16$ (16) $(x+[\quad])^2 = x^2 + 2x + 1$

(17) $(x-[\quad])^2 = x^2 - 14x + 49$ (18) $(x-[\quad])^2 = x^2 - 10x + 25$

(19) $(x-[\quad])^2 = x^2 - 18x + 81$ (20) $(x-[\quad])^2 = x^2 - 16x + 64$

(21) $x^2 + 2x + [\quad] = (x + [\quad])^2$ (22) $x^2 + 6x + [\quad] = (x + [\quad])^2$

(23) $x^2 + 8x + [\quad] = (x + [\quad])^2$ (24) $x^2 + 10x + [\quad] = (x + [\quad])^2$

(25) $x^2 - 4x + [\quad] = (x - [\quad])^2$ (26) $x^2 - 12x + [\quad] = (x - [\quad])^2$

(27) $x^2 - 2x + [\quad] = (x - [\quad])^2$ (28) $x^2 - 14x + [\quad] = (x - [\quad])^2$

(29) $x^2 + 5x + [\quad] = (x + [\quad])^2$ (30) $x^2 + 3x + [\quad] = (x + [\quad])^2$

(31) $x^2 + 7x + [\quad] = (x + [\quad])^2$ (32) $x^2 + x + [\quad] = (x + [\quad])^2$

(33) $x^2 - 3x + [\quad] = (x - [\quad])^2$ (34) $x^2 - 9x + [\quad] = (x - [\quad])^2$

2. 次の方程式を $(x+a)^2 = b$ の形にして解きなさい。

(1) $x^2 + 4x = 2$

(2) $x^2 + 6x = 2$

(3) $x^2 - 2x = 10$

(4) $x^2 - 8x = 1$

(5) $x^2 + 4x = 12$

(6) $x^2 - 6x = 40$

(7) $x^2 - 2x = 8$

(8) $x^2 - 10x = -9$

(9) $x^2 - 5x = -4$

(10) $x^2 + 7x = -12$