平方完成 03-1　　　　　　　　　　　　　　　　　　（　　/10)　　　（　　分　　秒)

次の 2 次関数を平方完成しなさい。

(1) $y = -2x^2 + x$

(2) $y = x^2 - 4x - 10$

(3) $y = 5x^2 - 7x + 7$

(4) $y = 5x^2 - 6x + 10$

(5) $y = x^2 - 4x - 7$

(6) $y = -4x^2 - x - 10$

(7) $y = 5x^2 + 4x - 10$

(8) $y = -5x^2 + 3x + 2$

(9) $y = 3x^2 - x - 8$

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

平方完成 03-1　　　　　　　　　　　　　　　　（　/10）　　　（　　分　　秒）

次の 2 次関数を平方完成しなさい。

(1) $y = -2x^2 + x$

$$y = -2\left(x - \frac{1}{4}\right)^2 + \frac{1}{8}$$

(2) $y = x^2 - 4x - 10$

$$y = (x - 2)^2 - 14$$

(3) $y = 5x^2 - 7x + 7$

$$y = 5\left(x - \frac{7}{10}\right)^2 + \frac{91}{20}$$

(4) $y = 5x^2 - 6x + 10$

$$y = 5\left(x - \frac{3}{5}\right)^2 + \frac{41}{5}$$

(5) $y = x^2 - 4x - 7$

$$y = (x - 2)^2 - 11$$

(6) $y = -4x^2 - x - 10$

$$y = -4\left(x + \frac{1}{8}\right)^2 - \frac{159}{16}$$

(7) $y = 5x^2 + 4x - 10$

$$y = 5\left(x + \frac{2}{5}\right)^2 - \frac{54}{5}$$

(8) $y = -5x^2 + 3x + 2$

$$y = -5\left(x - \frac{3}{10}\right)^2 + \frac{49}{20}$$

(9) $y = 3x^2 - x - 8$

$$y = 3\left(x - \frac{1}{6}\right)^2 - \frac{97}{12}$$

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

$$y = 3\left(x + \frac{5}{3}\right)^2 - \frac{34}{3}$$

平方完成 03-2   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

(1) $y = -2x^2 - 2x - 8$ (2) $y = 3x^2 + x + 7$

(3) $y = 4x^2 - 6x - 2$ (4) $y = 2x^2 - 2x + 6$

(5) $y = -4x^2 - 10x + 3$ (6) $y = x^2 + 7x - 8$

(7) $y = -3x^2 + 2x + 3$ (8) $y = x^2 - 9x - 8$

(9) $y = -2x^2 - 4x - 8$ (10) $y = -2x^2 - 5x - 6$

平方完成 03-2   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

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

$$y = -2\left(x + \frac{1}{2}\right)^2 - \frac{15}{2}$$

(2) $y = 3x^2 + x + 7$

$$y = 3\left(x + \frac{1}{6}\right)^2 + \frac{83}{12}$$

(3) $y = 4x^2 - 6x - 2$

$$y = 4\left(x - \frac{3}{4}\right)^2 - \frac{17}{4}$$

(4) $y = 2x^2 - 2x + 6$

$$y = 2\left(x - \frac{1}{2}\right)^2 + \frac{11}{2}$$

(5) $y = -4x^2 - 10x + 3$

$$y = -4\left(x + \frac{5}{4}\right)^2 + \frac{37}{4}$$

(6) $y = x^2 + 7x - 8$

$$y = \left(x + \frac{7}{2}\right)^2 - \frac{81}{4}$$

(7) $y = -3x^2 + 2x + 3$

$$y = -3\left(x - \frac{1}{3}\right)^2 + \frac{10}{3}$$

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

$$y = \left(x - \frac{9}{2}\right)^2 - \frac{113}{4}$$

(9) $y = -2x^2 - 4x - 8$

$$y = -2\left(x + 1\right)^2 - 6$$

(10) $y = -2x^2 - 5x - 6$

$$y = -2\left(x + \frac{5}{4}\right)^2 - \frac{23}{8}$$

平方完成 03-3　　　　　　　　　　　　　　　　　(　　/10)　　(　　分　　秒)

次の 2 次関数を平方完成しなさい。

(1) $y = 5x^2 - 3x - 5$

(2) $y = -3x^2 + x + 4$

(3) $y = x^2 + x - 7$

(4) $y = -5x^2 - 5x + 7$

(5) $y = -4x^2 + 10x + 8$

(6) $y = 4x^2 + 7x + 8$

(7) $y = x^2 - x - 4$

(8) $y = -5x^2 - 6x + 1$

(9) $y = -3x^2 + 5x - 9$

(10) $y = -x^2 - 4x + 4$

平方完成 03-3   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

(1) $y = 5x^2 - 3x - 5$

$$y = 5\left(x - \frac{3}{10}\right)^2 - \frac{109}{20}$$

(2) $y = -3x^2 + x + 4$

$$y = -3\left(x - \frac{1}{6}\right)^2 + \frac{49}{12}$$

(3) $y = x^2 + x - 7$

$$y = \left(x + \frac{1}{2}\right)^2 - \frac{29}{4}$$

(4) $y = -5x^2 - 5x + 7$

$$y = -5\left(x + \frac{1}{2}\right)^2 + \frac{33}{4}$$

(5) $y = -4x^2 + 10x + 8$

$$y = -4\left(x - \frac{5}{4}\right)^2 + \frac{57}{4}$$

(6) $y = 4x^2 + 7x + 8$

$$y = 4\left(x + \frac{7}{8}\right)^2 + \frac{79}{16}$$

(7) $y = x^2 - x - 4$

$$y = \left(x - \frac{1}{2}\right)^2 - \frac{17}{4}$$

(8) $y = -5x^2 - 6x + 1$

$$y = -5\left(x + \frac{3}{5}\right)^2 + \frac{14}{5}$$

(9) $y = -3x^2 + 5x - 9$

$$y = -3\left(x - \frac{5}{6}\right)^2 - \frac{83}{12}$$

(10) $y = -x^2 - 4x + 4$

$$y = -(x + 2)^2 + 8$$

平方完成 03-4   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

(1) $y = 2x^2 - 6x + 7$ (2) $y = 2x^2 + 8x + 8$

(3) $y = 4x^2 + 9x + 7$ (4) $y = -3x^2 + 4x + 9$

(5) $y = -2x^2 - 2x - 8$ (6) $y = -x^2 - 8x + 6$

(7) $y = -2x^2 - 3x$ (8) $y = 3x^2 + 9x - 3$

(9) $y = 5x^2 + 3x - 9$ (10) $y = -2x^2 + 8x + 5$

平方完成 03-4 (/10) (分 秒)

次の 2 次関数を平方完成しなさい。

(1) $y = 2x^2 - 6x + 7$

$$y = 2\left(x - \frac{3}{2}\right)^2 + \frac{5}{2}$$

(2) $y = 2x^2 + 8x + 8$

$$y = 2\left(x + 2\right)^2$$

(3) $y = 4x^2 + 9x + 7$

$$y = 4\left(x + \frac{9}{8}\right)^2 + \frac{31}{16}$$

(4) $y = -3x^2 + 4x + 9$

$$y = -3\left(x - \frac{2}{3}\right)^2 + \frac{31}{3}$$

(5) $y = -2x^2 - 2x - 8$

$$y = -2\left(x + \frac{1}{2}\right)^2 - \frac{15}{2}$$

(6) $y = -x^2 - 8x + 6$

$$y = -\left(x + 4\right)^2 + 22$$

(7) $y = -2x^2 - 3x$

$$y = -2\left(x + \frac{3}{4}\right)^2 + \frac{9}{8}$$

(8) $y = 3x^2 + 9x - 3$

$$y = 3\left(x + \frac{3}{2}\right)^2 - \frac{39}{4}$$

(9) $y = 5x^2 + 3x - 9$

$$y = 5\left(x + \frac{3}{10}\right)^2 - \frac{189}{20}$$

(10) $y = -2x^2 + 8x + 5$

$$y = -2\left(x - 2\right)^2 + 13$$

平方完成 03-5　　　　　　　　　　　　　　　　　　　（　／10）　　　（　　分　　秒）

次の 2 次関数を平方完成しなさい。

(1) $y = 2x^2 - 6x + 4$　　　　　　　　　　(2) $y = -3x^2 + 7x - 2$

(3) $y = x^2 - 5x + 10$　　　　　　　　　　(4) $y = -3x^2 - 3x + 9$

(5) $y = -2x^2 - 7x + 1$　　　　　　　　　(6) $y = -4x^2 - 6x + 4$

(7) $y = 4x^2 + 9x$　　　　　　　　　　　(8) $y = 5x^2 + 3x - 1$

(9) $y = -2x^2 + 2x + 9$　　　　　　　　(10) $y = 2x^2 - 2x - 5$

平方完成 03-5   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

(1) $y = 2x^2 - 6x + 4$

$$y = 2\left(x - \frac{3}{2}\right)^2 - \frac{1}{2}$$

(2) $y = -3x^2 + 7x - 2$

$$y = -3\left(x - \frac{7}{6}\right)^2 + \frac{25}{12}$$

(3) $y = x^2 - 5x + 10$

$$y = \left(x - \frac{5}{2}\right)^2 + \frac{15}{4}$$

(4) $y = -3x^2 - 3x + 9$

$$y = -3\left(x + \frac{1}{2}\right)^2 + \frac{39}{4}$$

(5) $y = -2x^2 - 7x + 1$

$$y = -2\left(x + \frac{7}{4}\right)^2 + \frac{57}{8}$$

(6) $y = -4x^2 - 6x + 4$

$$y = -4\left(x + \frac{3}{4}\right)^2 + \frac{25}{4}$$

(7) $y = 4x^2 + 9x$

$$y = 4\left(x + \frac{9}{8}\right)^2 - \frac{81}{16}$$

(8) $y = 5x^2 + 3x - 1$

$$y = 5\left(x + \frac{3}{10}\right)^2 - \frac{29}{20}$$

(9) $y = -2x^2 + 2x + 9$

$$y = -2\left(x - \frac{1}{2}\right)^2 + \frac{19}{2}$$

(10) $y = 2x^2 - 2x - 5$

$$y = 2\left(x - \frac{1}{2}\right)^2 - \frac{11}{2}$$

平方完成 03-6   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

(1) $y = 2x^2 + 6x - 2$ (2) $y = 5x^2 + 2x + 10$

(3) $y = 3x^2 + 9x - 4$ (4) $y = -2x^2 + 5x + 8$

(5) $y = -2x^2 + 3x - 5$ (6) $y = x^2 - 3x + 6$

(7) $y = -2x^2 - 8x - 7$ (8) $y = 3x^2 + 7x - 10$

(9) $y = 3x^2 - x + 9$ (10) $y = 4x^2 + 6x + 10$

平方完成 03-6　　　　　　　　　　　　　　　　　　　（　　/10)　　　（　　分　　秒）

次の 2 次関数を平方完成しなさい。

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

$$y = 2\left(x + \frac{3}{2}\right)^2 - \frac{13}{2}$$

(2) $y = 5x^2 + 2x + 10$

$$y = 5\left(x + \frac{1}{5}\right)^2 + \frac{49}{5}$$

(3) $y = 3x^2 + 9x - 4$

$$y = 3\left(x + \frac{3}{2}\right)^2 - \frac{43}{4}$$

(4) $y = -2x^2 + 5x + 8$

$$y = -2\left(x - \frac{5}{4}\right)^2 + \frac{89}{8}$$

(5) $y = -2x^2 + 3x - 5$

$$y = -2\left(x - \frac{3}{4}\right)^2 - \frac{31}{8}$$

(6) $y = x^2 - 3x + 6$

$$y = \left(x - \frac{3}{2}\right)^2 + \frac{15}{4}$$

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

$$y = -2\left(x + 2\right)^2 + 1$$

(8) $y = 3x^2 + 7x - 10$

$$y = 3\left(x + \frac{7}{6}\right)^2 - \frac{169}{12}$$

(9) $y = 3x^2 - x + 9$

$$y = 3\left(x - \frac{1}{6}\right)^2 + \frac{107}{12}$$

(10) $y = 4x^2 + 6x + 10$

$$y = 4\left(x + \frac{3}{4}\right)^2 + \frac{31}{4}$$

平方完成 03-7 （　　/10）　　（　　分　　秒）

次の2次関数を平方完成しなさい。

(1) $y = 5x^2 - 5x - 3$

(2) $y = 4x^2 + 4x - 6$

(3) $y = -3x^2 + 5x - 5$

(4) $y = 2x^2 + 2x - 10$

(5) $y = 5x^2 + 10x + 10$

(6) $y = 5x^2 + 7x + 10$

(7) $y = -3x^2 + 3x - 6$

(8) $y = 5x^2 - 8x - 9$

(9) $y = -2x^2 + x - 7$

(10) $y = 2x^2 + 4x + 10$

平方完成 03-7　　　　　　　　　　　　　　　　　　(　/10)　　　(　分　　秒)

次の 2 次関数を平方完成しなさい。

(1) $y = 5x^2 - 5x - 3$

$$y = 5\left(x - \frac{1}{2}\right)^2 - \frac{17}{4}$$

(2) $y = 4x^2 + 4x - 6$

$$y = 4\left(x + \frac{1}{2}\right)^2 - 7$$

(3) $y = -3x^2 + 5x - 5$

$$y = -3\left(x - \frac{5}{6}\right)^2 - \frac{35}{12}$$

(4) $y = 2x^2 + 2x - 10$

$$y = 2\left(x + \frac{1}{2}\right)^2 - \frac{21}{2}$$

(5) $y = 5x^2 + 10x + 10$

$$y = 5\left(x + 1\right)^2 + 5$$

(6) $y = 5x^2 + 7x + 10$

$$y = 5\left(x + \frac{7}{10}\right)^2 + \frac{151}{20}$$

(7) $y = -3x^2 + 3x - 6$

$$y = -3\left(x - \frac{1}{2}\right)^2 - \frac{21}{4}$$

(8) $y = 5x^2 - 8x - 9$

$$y = 5\left(x - \frac{4}{5}\right)^2 - \frac{61}{5}$$

(9) $y = -2x^2 + x - 7$

$$y = -2\left(x - \frac{1}{4}\right)^2 - \frac{55}{8}$$

(10) $y = 2x^2 + 4x + 10$

$$y = 2\left(x + 1\right)^2 + 8$$

平方完成 03-8 （　　/10)　　（　　分　　秒)

次の 2 次関数を平方完成しなさい。

(1) $y = 4x^2 - 5x$

(2) $y = 3x^2 - 8x + 8$

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

(4) $y = 5x^2 + x - 6$

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

(6) $y = 5x^2 + x - 7$

(7) $y = -x^2 + 7x + 1$

(8) $y = 5x^2 + 9x + 5$

(9) $y = -2x^2 - 7x - 3$

(10) $y = -4x^2 - 5x + 4$

平方完成 03-8　　　　　　　　　　　　　　　　　　　　(　 /10)　　　(　 分 　 秒)

次の 2 次関数を平方完成しなさい。

(1) $y = 4x^2 - 5x$

$$y = 4\left(x - \frac{5}{8}\right)^2 - \frac{25}{16}$$

(2) $y = 3x^2 - 8x + 8$

$$y = 3\left(x - \frac{4}{3}\right)^2 + \frac{8}{3}$$

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

$$y = -(x + 5)^2 + 25$$

(4) $y = 5x^2 + x - 6$

$$y = 5\left(x + \frac{1}{10}\right)^2 - \frac{121}{20}$$

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

$$y = -2\left(x - \frac{9}{4}\right)^2 + \frac{113}{8}$$

(6) $y = 5x^2 + x - 7$

$$y = 5\left(x + \frac{1}{10}\right)^2 - \frac{141}{20}$$

(7) $y = -x^2 + 7x + 1$

$$y = -\left(x - \frac{7}{2}\right)^2 + \frac{53}{4}$$

(8) $y = 5x^2 + 9x + 5$

$$y = 5\left(x + \frac{9}{10}\right)^2 + \frac{19}{20}$$

(9) $y = -2x^2 - 7x - 3$

$$y = -2\left(x + \frac{7}{4}\right)^2 + \frac{25}{8}$$

(10) $y = -4x^2 - 5x + 4$

$$y = -4\left(x + \frac{5}{8}\right)^2 + \frac{89}{16}$$

平方完成 03-9   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

(1) $y = -4x^2 - 3x + 3$ (2) $y = -x^2 + 3x$

(3) $y = 3x^2 - 2x - 5$ (4) $y = -4x^2 + 4x + 1$

(5) $y = 2x^2 - 10x + 2$ (6) $y = 3x^2 + 2x - 7$

(7) $y = 5x^2 - 8x + 3$ (8) $y = -x^2 + x + 3$

(9) $y = -3x^2 + 5x$ (10) $y = -3x^2 - 7x + 5$

平方完成 03-9   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

(1) $y = -4x^2 - 3x + 3$

$$y = -4\left(x + \frac{3}{8}\right)^2 + \frac{57}{16}$$

(2) $y = -x^2 + 3x$

$$y = -\left(x - \frac{3}{2}\right)^2 + \frac{9}{4}$$

(3) $y = 3x^2 - 2x - 5$

$$y = 3\left(x - \frac{1}{3}\right)^2 - \frac{16}{3}$$

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

$$y = -4\left(x - \frac{1}{2}\right)^2 + 2$$

(5) $y = 2x^2 - 10x + 2$

$$y = 2\left(x - \frac{5}{2}\right)^2 - \frac{21}{2}$$

(6) $y = 3x^2 + 2x - 7$

$$y = 3\left(x + \frac{1}{3}\right)^2 - \frac{22}{3}$$

(7) $y = 5x^2 - 8x + 3$

$$y = 5\left(x - \frac{4}{5}\right)^2 - \frac{1}{5}$$

(8) $y = -x^2 + x + 3$

$$y = -\left(x - \frac{1}{2}\right)^2 + \frac{13}{4}$$

(9) $y = -3x^2 + 5x$

$$y = -3\left(x - \frac{5}{6}\right)^2 + \frac{25}{12}$$

(10) $y = -3x^2 - 7x + 5$

$$y = -3\left(x + \frac{7}{6}\right)^2 + \frac{109}{12}$$

平方完成 03-10   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

(1) $y = -3x^2 + 9x$

(2) $y = x^2 + 7x + 2$

(3) $y = -5x^2 + 5x$

(4) $y = -2x^2 + x + 2$

(5) $y = -4x^2 - 9x - 7$

(6) $y = -3x^2 + 2x - 1$

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

(8) $y = -3x^2 - x + 8$

(9) $y = -3x^2 + 8x - 8$

(10) $y = 4x^2 + 10x - 2$

平方完成 03-10   (/10)   (分   秒)

次の 2 次関数を平方完成しなさい。

(1) $y = -3x^2 + 9x$

$$y = -3\left(x - \frac{3}{2}\right)^2 + \frac{27}{4}$$

(2) $y = x^2 + 7x + 2$

$$y = \left(x + \frac{7}{2}\right)^2 - \frac{41}{4}$$

(3) $y = -5x^2 + 5x$

$$y = -5\left(x - \frac{1}{2}\right)^2 + \frac{5}{4}$$

(4) $y = -2x^2 + x + 2$

$$y = -2\left(x - \frac{1}{4}\right)^2 + \frac{17}{8}$$

(5) $y = -4x^2 - 9x - 7$

$$y = -4\left(x + \frac{9}{8}\right)^2 - \frac{31}{16}$$

(6) $y = -3x^2 + 2x - 1$

$$y = -3\left(x - \frac{1}{3}\right)^2 - \frac{2}{3}$$

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

$$y = -(x + 1)^2 + 9$$

(8) $y = -3x^2 - x + 8$

$$y = -3\left(x + \frac{1}{6}\right)^2 + \frac{97}{12}$$

(9) $y = -3x^2 + 8x - 8$

$$y = -3\left(x - \frac{4}{3}\right)^2 - \frac{8}{3}$$

(10) $y = 4x^2 + 10x - 2$

$$y = 4\left(x + \frac{5}{4}\right)^2 - \frac{33}{4}$$