$\frac{10\times(-2)}{4}+|-2-5|$

$=\frac{-20}{4}+7$

$=-5+7=2.$

$\frac{21-7|}{3}+|-9+5|$

$=\frac{2\cdot 9}{3}+4$

$=6+4=10$

$\frac{4\cdot 6}{2}+9$

$=\frac{24}{2}+9$

$=12+9=21$

$(6-2)^2/2+1$

$=4^2/2+1$

$=16/2+1$

$=8+1=9$

$(7-3)\times\sqrt{25}\times 2-10$

$=4\times 5\times 2-10$

$=40-10=30$

$4+(8+\sqrt{9})/(2+4)$

$=4+(8+3)/6$

$=4+2\frac{4}{6}$

$=4+4=8$

$10^2=100$

$10^1=10$

$10^0=1$

10 - 1

$$\frac{a^{14}}{(a^2)^5} = \frac{a^{14}}{a^{10}} = a^4$$

↳ a^4

$$(a^6)^2 a^2$$

$$= a^{12} a^2$$

$$= a^{12} a^2$$

$$= a^{(12+7)} = a^{19}$$

$$\frac{(2^5)^3 2^{-7}}{2^{-6}}$$

$$= 2^{15-2} * \frac{1}{2^{-6}}$$

$$= 2^8 * 2^{+6}$$

$$= 2^{14}$$

$$\frac{(2^3)^{10} 2^{-8}}{2^{-2}}$$

$$= 2^{30-8} \times 2^2$$

$$= 2^{22+2} = 2^{29}$$

$$(2^{10})^3 2^{-10}$$

2^{-9}

$= 2^{30-10} * 2^{7}$

$= 2^{27}$

$6^{2/5} = \sqrt[5]{6^2}$

$\cancel{\sqrt[8]{5^8} = 5^{8/6}}$

$5^{3/8} = \sqrt[8]{5^3}$

$\sqrt[4]{3}^{7} = 3^{7/4}$

$\left(\frac{x^{1/2}}{x^{1/5}}\right)^{1/4}$

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

$= x^{\left(\frac{5}{10}-\frac{2}{10}\right)\times \frac{1}{4}}$

$= x^{\left(\frac{3}{10}\times\frac{1}{4}\right)} = \cancel{\frac{a}{a}}$

$x^{\frac{3}{40}}$

$\left(\frac{x^{1/2}}{x^{1/3}}\right)^{1/4}$

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

$= \left(\frac{3}{6}-\frac{2}{6}\right)\cdot\frac{1}{4}$

$= \frac{1}{6} * \frac{1}{4} = \frac{1}{24}$

$= x^{1/24}$

$\left(\frac{x^{1/2}}{x^{1/4}}\right)^{1/5}$

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

$\frac{1}{4} \cdot \frac{1}{5}$

$x^{\frac{1}{20}}$

2.1×3.4

84

63

7.14

$1.2 \times 4.9 \times 10^9$

$5.6 / 1.6$

10^{6}

$(3.11 \times 10^4) + (2 \times 10^3)$

$= (31.1 \times 10^3) + (2 \times 10^3)$

$= 31.1 + 2 = 33.1$

$\times 10^2$

$2.1 + 240$

242.1×10^4

$2.1 + 7.40$

$= 742.1 \times 10^3$

$= 7.421 \times 10^6$

$4.55 \quad -6.1$

6.0

-4.55

1.55

-1.55×10^6

$\sqrt{280}$

$= 2 \times 140$

$= 2 \times 2 \times 70$

$= 2\sqrt{70}$

$\sqrt{495}$

$= 3 \times 165$

$= 3 \times 3 \times 55$

$= 3\sqrt{55}$

$\sqrt{\frac{x^2}{16}}$

$= \frac{\sqrt{xy^2}}{\sqrt{4}} \frac{y\sqrt{x}}{4}$

$\sqrt[3]{8xy^3}$

$= 2y\sqrt{x}$

$= 2yx^{\frac{1}{2}}$

$= 2xy$

$\sqrt[3]{8xy^3}$

$= \sqrt[3]{8} \cdot \sqrt[3]{x} \cdot \sqrt[3]{y^3}$

$= 2 \cdot \sqrt[3]{x} \cdot y$

$= 2y\sqrt[3]{x}$

$\sqrt[3]{125x^3y}$

$= \sqrt[3]{125} \cdot \sqrt[3]{x^3} \sqrt[3]{y}$

$= 5x\sqrt[3]{y}$

31

$\sqrt{25}$

$\sqrt{25^2 + 31^2}$

$= \sqrt{625 + 961}$

$= \sqrt{1586}$

[illegible]

$= 5 + \sqrt{31^2}$

$= 5 + 31$

$= 36$

176

1898

$\sqrt{200}$

$= 2 \times 100$

$= 2 \times 2 \times 50$

$= 2\sqrt{50}$

$= 2\sqrt{2 \times 25}$

$= 10\sqrt{2}$

$$\left(\frac{a^{1/3}}{a^{1/6}}\right)^{1/2}$$

$$\frac{\sqrt[3]{a}}{\sqrt[6]{a}} = \frac{\sqrt[3]{a}}{\sqrt{\sqrt[3]{a}}\cdot\sqrt[3]{a}}$$

$$= \sqrt{\frac{1}{\sqrt[3]{a}}}$$

$$= \sqrt[6]{\frac{1}{a}}$$

$$\left(\frac{a^{1/3}}{a^{1/6}}\right)^{1/2}$$ わからん

$$\left(\frac{\sqrt[3]{a}}{\sqrt[6]{a}}\right)^{1/2}$$

$$\left(\frac{\sqrt[3]{a}}{\sqrt[3]{a}} + \frac{1}{\sqrt[3]{a}}\right)^{1/2}$$

$$= \left(1 + \frac{1}{\sqrt[3]{a}}\right)^{1/2}$$

= [redacted] わかんない!!

$\frac{\sqrt[3]{a}}{\sqrt[3]{a}\sqrt[3]{a}}$ 多 $\sqrt[3]{\frac{1}{a}}$

$$\left(\frac{a^{1/3}}{a^{1/5}}\right)^{1/2}$$

$$= \left(\frac{a^{1/3}}{a^{1/5} \cdot a^{1/3}}\right)^{1/2}$$

$$= \left(\frac{a^{1/3}}{a^{1/3}} + \frac{1}{a^{1/3}}\right)^{1/2}$$

$$= \left(1 + \frac{1}{3^{1/3}}\right)^{1/2}$$

$$\sqrt{64} + 3(5^2 - 2)$$

$$= 8 + 3 \cdot 23$$
$$= 8 + 69$$
$$= 77$$

$$\left(\frac{c}{c^2}\right)^{-2}$$

$$= \frac{1}{c}^{-2}$$

$$\sqrt[4]{81 \cdot x^8}$$

$$= 3 \cdot 3x$$

$$\sqrt[6]{10^5 x}$$

$$= \sqrt[6]{10^5} \cdot \sqrt[6]{x}$$

$= 10^{\frac{5}{6}} \cdot x^{\frac{1}{6}}$

$10 + 14 + 12/6$

$= 24 + 2 = 26$

$k + 6 + 9$

$= 15$

45
45
225
180
2025

4.5
4.5
225
180
2025
× 3
6075
× 75
30375
42525
455625

$(x^3)^3 x^4$

$= x^7 x^7$

$= x^{13}$

$\frac{5}{(-5)^2} = \frac{5}{25}$

$\sqrt{22-6}$

$= \sqrt{16}$

$= 4 + 5 * (16-9)$

$= 4 + 5 \cdot 7$

$= 4 + 35$

$= 39$

$2x(3+1)$

$= 8$

$5\sqrt[3]{x^3}$

$= 5x$

$-8+24$

$= 16 + \frac{9}{2} - 2$

$= 23$

$$\frac{b^{-6}}{b^{-5}}$$

$$b^{-1}$$

$$c^8 c^3 = c^{11}$$

$$\frac{\sqrt[4]{b^3}}{\sqrt[4]{b}}$$

$$\therefore \sqrt[4]{\frac{b^3}{b}} = \sqrt[4]{b^2}$$

$$\sqrt[4]{b^2} = b^{\frac{1}{4/2}}$$

$$(b^{\frac{1}{2}})^{\frac{1}{2}}$$

$$\sqrt[3]{40}$$

$$= 2 \times 20$$

$$= 2 \times 2 \times 10$$

$$= 2\sqrt[3]{10}$$

$$1 + 4 + 1 - 8$$

$$= 6 - 8 =$$

$21+17-15$

$=21+2=23$

$\sqrt[4]{10^5 x}$

$=\sqrt[4]{10^5}\sqrt[4]{x}$

$=\sqrt[4]{10^4}\sqrt[4]{10}$

$=10\sqrt[4]{10x}$

$\sqrt[4]{10}\sqrt[4]{x}$

$=10^{\frac{1}{4}}x^{\frac{1}{4}}$

$1.\overline{3}$

これなに

$5\sqrt{2\cdot2\cdot3}\,a$

$-2\sqrt{3\cdot3\cdot3}$

$= 10\sqrt{3} - 6\sqrt{3}$

$3\sqrt{2 \cdot 2 \cdot 10} - 2\sqrt{10}$

$= 6\sqrt{10} - 2\sqrt{10}$

$2\sqrt{3 \cdot 3 \cdot 5}$

$+ 7\sqrt{2 \cdot 2 \cdot 5}$

$= 6\sqrt{5} + 14\sqrt{5}$

$8 + 4\sqrt{7}$

$-2\sqrt{7} + 7$

$= 9 + 2\sqrt{7}$

$4\sqrt{3} + 3 - 8 - 2\sqrt{3}$

$= -5 + 2\sqrt{3}$

~~$5 + 6\sqrt{5} - 3\sqrt{5} - 18$~~

$5 + 6\sqrt{5} - 3\sqrt{5} - 18$

$= -13$

$(4 + 2\sqrt{2})(3 + \sqrt{2})$

$(3 - \sqrt{7})(3 + \sqrt{7})$

$= \frac{}{9 + \cdots - 7}$

$= \frac{12+4\sqrt{7}+6\sqrt{7}+14}{2}$

$= \frac{26+10\sqrt{7}}{2}$

$= 13+5\sqrt{7}$

$(\sqrt{3}-1)(\sqrt{3}+1)$

$= \frac{}{3+\sqrt{3}-\sqrt{3}+1}$

$= \frac{}{4}$

$= \frac{(6+10\sqrt{3})(\sqrt{3}+1)}{4}$

$= 6\sqrt{3}+6+30+10\sqrt{3}$

$= \frac{36+16\sqrt{3}}{4}$

$= 9+4\sqrt{3}$

$= 18$

$(\sqrt{5}-2)(\sqrt{5}+2)$

$= 5+2\sqrt{5}-2\sqrt{5}-4$

$= 1$

$(6+3\sqrt{5})(\sqrt{5}+2)$

$= 6\sqrt{5} + 12 + 15 + 6\sqrt{5}$

$= 27 +$

$8x^3 + 2x + 5x$

$9y^4 - y^2$

$6x^2 + 7x$

$-13y$

$-6x + 24$

$7 = \frac{x}{-3}$

$4\left(\sqrt[3]{6x+10}\right)^3$

$4 \cdot 4 \cdot 4 = 6x + 10$

$6x = 4^3 - 10$

$6x = 16 \cdot 4 - 10$

$= 64 - 10$

$= 54$

$x = \frac{54}{6} = 9$

$2^4 = 4 + 3x$

$3x = 44 - 4$

$= 16 - 4$

$= \frac{12}{3}\pi$

$\frac{V}{r^2} = \frac{4}{3}\pi r$

$r = \frac{3V}{4r^2\pi}$

$V = \frac{4}{3}\pi r$

$\frac{4}{3}\pi r^3 = V$

$\pi r^3 = \frac{3}{4}V$

$r^3 = \frac{3V}{4\pi}$

$r = \sqrt{\frac{3V}{4\pi}}$

$a = \frac{1}{2}bh$

$bh = \frac{2a}{h}$

$C = 25y + 10$

$y = 30x + 15$

$C = (30x + 15)^{25}$

$+10$

$= 30x + 1$

$25(30x+15)+10$

750

$2x - 4 = 6$ (10)

$x - 2 = 6$

$\boxed{x = 8}$

~~$-7x = -15$~~

$5x = -11 + 6$

$= -6$

$2x = 5$

$2y = 7 - 9$

$\frac{1}{4}y = -2$

$y = -1$

$9y = 8 + 1$

$= -9$

$2y = -4 - 6$

$y = -2 + 1$

$5x - 10 \leq 7x + 6$

$\cancel{7}-2 \leq$

$5x \leq 7x+6$
$+10$

$\frac{5x}{\cancel{8}} \leq \frac{7x+16}{7x}$

$\frac{5x-10}{7x+6} \leq 0$

$-(5x-10)(7x+6)$

$7x < 21$
$x < 3$

$36+31.2 < 1.02D$

$67.2 < 1.02D <$
$41+31.2$

$\frac{67.2}{1.02} / 0 / \frac{72.2}{1.02}$

$\frac{\cancel{67.2}\ 336}{\cancel{102}\ 51}$

$65\ 9 \leq$

$2x+4=18$
$2x=14$
$x=7$

$-2x-4=18$

$-2x + 22$

$2x = -22$

$x = 11$

$2x - 6 < 9$

$x - 3 < 2$

$x < 5$

$-2x + 6 < 9$

$+2x < +2$

$x \geq 1$

$1 < x < 5$

$x + 3 \quad (30)$

$\div x + 90$

$S_{23} = \frac{23}{2}(9 + \square)$

$a_{23} = 9 + d(22)$

$= 9 + 5 \times 22$

$= 9 + 110$

$= 119$

$S_{23} = \frac{23}{2}(9 + 119)$

$= \frac{23}{2} \times \frac{64}{128}$

$= 23 \times 64$

$$\frac{40\times0.25+60\times0.4}{100}$$

$$= 10+24$$

$$\frac{-4-3}{7-5} = \frac{-7}{2}$$

$$\frac{4-1}{-3-6} = \frac{3}{-9}$$

$y = -2x-6-6$

$= +12-6$

$= 6$

$y = -2x-3-6$ (b)

$= 6-6 = 0$

$y = -2\cdot-\frac{1}{3}-6$

$= +\frac{2}{3}-6$

$y = -2\cdot-2-6$

$= 4-6 = -2$

$y = -9 \cdot 0 \text{ or } 3$

$y = 0-3$

$y = 0-9$

$3x-4y = 8$

$-4y = -3x+8$

$y = 3x-8$

4

$= \frac{3}{4}x - 2$

$1 = 4 \cdot -1 + x$

$= -4 + x$

$x = 1 + 4 = 5$

$y = 4x + 5$

$y - 4 = -\frac{2}{3}(x+3)$

$y = -\frac{2}{3}x - 2 + 4$

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

$3 = 0x$

$y = x + 3$

$4 = 4a + 3$

$4a = 4 - 3$

$a = \frac{1}{4}$

$y = \frac{1}{4}x + 3$

$y = 3x - 7$

$4x - 5y = 20$

$+5y = +20 + 4x$

$y = \frac{4}{5}x + 4$

$3x - 7 = \frac{4}{5}x + 4$

$15x - 35 = 4x + 20$

$11x = 55$

$x = 5$

$y = \frac{4}{5} \cdot 5 + 4$

$= 8 \quad (5, 8)$

$3x - 2y = 12$

$-2y = -3x + 12$

$y = \frac{3}{2}x - 6$

$y = \frac{3}{2}x - 6$

$3x + 2y = 0$

$2y = -3x$

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

$+\frac{3}{2}x + \frac{3}{2}x = +6$

$\frac{6}{2}x = 6$

$3x = 6$

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

$= -3$

$(2, -3)$

$-y = -3x + 1$

$y = 3x - 1$

$x + 2(3x - 1) = 5$

$7x = 7$

$x = 1$

$y = 3 \cdot 1 - 1$

$= 2$

$y = 4x + 1$

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

$8x + 2 = -x - 1$

$9x = -3$

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

$y = 0{,}99x + 5$

$y = 0{,}29x + 10$

$x = P$

$y : C$

$2x = 4x0 - 4y$

$2y = 4y$

$x = 2z$

$4y = 8z - h$

$x + y = 12$

$1.5(x - y) = 12$

$15x - 15y = 120$

$3x - 3y = 24$

$x - y = 8$

$x = 8 + y$

$8 + 2y = 12$

$2y = 4$

$y = 2$

$x + 2 = 12$

$x = 10$

$\frac{180}{d} + 10 = \frac{150}{c}$

$180 + 10d = \frac{150d}{c}$

$180c + 10cd = 150d$

$8290 - 6135$

$= \frac{2155}{5}$

$= 431$

$y = 0.5 \cdot 4 + 1.8$

$= 2 + 1.8 = 3.8$ (A)

$= 0.5 \cdot 3 + 1.8$

$= 1.5 + 1.8 = 3.3$

$2x^3$

$4x^2y - 3xy^2$

$= 8x^5y - 6x^4y^2$

$(x-4)(x-8)(x-2)$

$= (x^2 - 8x - 8x + 32)(x-2)$

$= (x^2 - 16x + 32)(x-2)$

$= x^3 - 16x^2 + 32x - 2x^2$

$+ 32x - 64$

$= x^3 - 18x^2 + 64x - 64$

$4x^5 \quad 3x \quad 1$

$8x^6 - 6x^2 - 2x$

$2x$

$= 4x^5 - 3x - 1$

$-2 + 5a - 10b + 5$

$-2 + 6a - 3b$

$= 11a - 13b + 3 - 21$

$= 11a - 13b - 18$

$-2 + 5(a - 2b + 1)$

$= -2 + 5a - 10b + 5$

$= 5a - 10b + 3$

$-3(8 - 2a + b)$

$= 5a - 10b + 3 - 24$

$+ 6a - 3b$

$= 11a - 13b - 21$

0.375×0.25

$+0.625\times0.65$

$=0.09375+0.40625$

$=0.5$

$75\rightarrow 1.25$

$7(2x+1)+6=36$

$14x+2=30$

$14x=\frac{23}{14}$

$a_{18}=-2+17\times2$

$=-2+34$

$=32$

$S_{18}=\frac{9\times-2+32}{2}$

$=9\times32$

$=288$

$|5x-2|=13$

$5x-2=13$

$5x=15$

$x=3$

$-5x+2=13$

$-5x=11$

$x=-\frac{11}{5}$

$4\sqrt{2\cdot2\cdot3}-\sqrt{3\cdot3\cdot3}+5\sqrt{3}$

$=8\sqrt{3}-3\sqrt{3}+5\sqrt{3}$

$=10\sqrt{3}$

$1.25N=7$

1.43

$N = 25\sqrt{t}$

$100 = 25\sqrt{t} \times \sqrt{t}$

$25t = 100\sqrt{t}$

$t = 4\sqrt{t}$

$-x + 4 + 3x + 6$

$= 2x + 10$

$x - 9 < 5$

$x < 14$

$-x + 9 < 5$

$-x < -4$

$4 < x < 14$

$10x - 3 > 5x + 2$

$5x > 10$

$x > 2$

$V = 75000\phi - 12\phi x$

45000ϕ

$45000 = 75000 - 12x$

$12x = 30000$

$x = 2500$

$48000 = 75000 - 12x$

$12x = 27000$

$x = 2250$

$(\sqrt{5} + 2)(4 - \sqrt{5})$

$= 4\sqrt{5} - 5 + 8 - 2\sqrt{5}$

$= 2\sqrt{5} + 3$

$-15 = -22 + 1.4x$

$1.4x = -15 + 21$

$= -6$

$1.4x = -15 + 22 - 1$

$= -15 + 21$

$= -6$

$6775 = 2500 + 225x$

$225x = 4275 = 19$

$$\frac{4+\sqrt{5}\,(\sqrt{5}+2)}{(\sqrt{5}-2)(\sqrt{5}+2)}$$

$$= \frac{\quad}{5 + 2\sqrt{5} - 2\sqrt{5} - 4}$$

$= \sqrt{\ }$

$(4+\sqrt{5})(\sqrt{5}+2)$

$= 4\sqrt{5} + 8 + 5 + 2\sqrt{5}$

$= 13 + 6\sqrt{5}$

~~$90 = 65x$~~

$1.08x = 90$

$a_{18} = -2 + d(17)$

$= -2 + 2 \times 17$

$= 32$

$S_{18} = \frac{18}{2}(-2+32)$

$= 9 \times 30 = 270$

$100 = 25\sqrt{t}$

$\sqrt{t} = 4$

$-15 = -22 + 1.4x$

$1.4x = -15 + 22$

$= 7$

$x = \frac{7}{1.4}$

$6775 = 225x + 2500$

$225x = 6275 - 2500$

$= 4275$

$y = -2x + 0$

~~$11 = -2x$~~

$-11 = -2.5 + a$

$a = -11 + 10$

$= -1$

$y = -2x - 1$

<

B=

3=

$-4 = -3a + b$

$-1 = 2a + b$

$b = -1 - 2a$

$= -2a - 1$

$-9 = -3a - 2a - 1$

$= -3a - 1$

$+5a = -9 + 1$

$= +\frac{3}{5}$

$4x + 2y = 9$

$3x - y = -7$

$+y = +7 + 3x$

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

$4x + 6x + 14 = 9$

$10x = -10$

$x = -1$

$y = -3 + 7 = 4$

$3y = -2x + 12$

$+3y = +2x$

$4x = 12$

$x = 3$

$3y = 6$ $(3, 2)$

$y = 2$

$-3y = -2x + 9$

$+7 = 2x - 9$

$\frac{7}{3}$

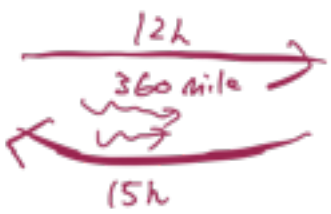
$y = \frac{2}{3}x - 3$

~~$2x + 7$~~

$20000 \geq x$

$\cancel{y \geq 4x}$

$4y \geq x$



$\cancel{12(x+y) = 15x}$

$12x + 12y = 15x$

$4x + 4y = 5x$

$+5x = +4y$

$x = \frac{4}{5}y$

$12\left(\frac{4}{5}y + \frac{5}{5}y\right) = 15 \times \frac{4}{5}y$

$\frac{48 + 60y}{5} = 12y$

$\frac{108y}{5} = 12y$

$12(x+y) = 15x - 15y$

$12x + 12y = 15x - 15y$

$12x + 12y = 360$

$15x - 15y = 360$

$x + y = \frac{180}{6} = 30$

$x + y = 30$

$\cancel{15}x - \cancel{15}y = \frac{\cancel{360}^{72}}{\cancel{15}_{3}}$

$x - y = -24$

$y = 30 - x$

$x - 30 + x = -2y$

$2x = 6$

$x = 3$

$y = 30 - 3 = 27$

$4 =$

$(0, 4)$

$(5, 2)$

$2 = 5a + b$

$4 = b$

$2 = 5a + 4$

$-2 = 5a$

$a = \frac{-2}{5}$

$y = -4x + 15$

$4x = 15$

$\frac{15}{4} = 3.$

$4 \overline{)15}^{3.7}$

12

30

$2.20a + 3.6b = 44.00$

$2.5c + 3.4d = 49.7$

$0.1x + 0.85y = 10.0$

$10x + 85y = 10.40$

400

$2x+17y=80$

$x+\frac{17}{2}y=40$

$x=-\frac{7}{2}y+40$

$2(-\frac{7}{2}y+40)+17y$

$=-7y+80+17y=80$

$10y=0.$

$15x+1000$

$44.2=2.2a+3.606$

$x+y=10$

$0.1x+0.85y=0.4$

$10x+85y=40$

$2x+17y=8$

$y=10-x$

$2x+17(10-x)=8$

$2x+170-17x=8$

$+15x=+162$

$x=\frac{162}{15}$

$=\frac{54}{5}$

x 10% , $10-x$ 85%

$0.1x+0.8(10-x)=0.4$

$x+8.5(10-x)=4$

$x+85-8.5x=4$

$\bigcirc = -81$

$10x - 85x = -810$

$-75x = -810$

$-75x = 162$

$-75 \quad -75$

$x = -2.16$

$-1 \mid x^3 - 2x^2 + 4$

$1 \quad -2 \quad 0 \quad 4$

$2x^2 + 20x + 15 = 127$

$2x^2 + 20x - 112 = 0$

2

$x^2 + 10x - 56 = 0$

$2 \cdot 28$

$2 \cdot 2 \cdot 14$

$2 \cdot 2 \cdot 7 \cdot 2$

$-4 \quad +14$

$(x-4)(x+14) = 0$

$2x^2 + 8x - 24 = 0$

$x^2 + 4x - 12 = 0$

$x^2 + 4x - 16 = 0$

$\frac{2x^2 + 8x}{2} = \frac{24}{2}$

$x^2 + 4x = 12$

$x(x+4) = 12$

$2x^2 + 8x - 24 = 0$

$x^2 + 4x - 12 = 0$

$x^2 + 4x + 4 = 12$

$(x+2)^2 = \pm\sqrt{12} + 16$

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

$=16$

$2x^2-16x=18$

$x^2-8x=9$

$(x-4)^2-16=9$

$x^2-8x+16=9$

$(a+b)^2$

$a^2+2ab+b^2$

x^2+4x+4

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

$=x^2+2x+2x+4$

$=x^2+4x+4$

$3x^2-12x=15$

$x^2-4x=5+4$

$2\cdot a\cdot b$

2

$=9$

$(x-2)^2$

x^2-4x+4

$x^2-5x+4\leq 0$

$(x-1)(x-4)\leq 0$

$x=1,4$

$0\ 5$

$1\leq x\leq 4$

$-1\times -4: 4\geq 4$

$4\times 1=4\geq 0$

$1\times -2=-2\leq 4$

$y=-2x^2+8x+16$

$y=-2\cdot 2^2+8\times 2+16$

$=-2\cdot 4+16+16$

$= -8 + 32$

$= 24$ (b)

$y = -2 \cdot 4 + 8 \cdot -2 + 16$

$= -8 - 16 + 16$

$= (2, -8)$ (d)

$x = \frac{-b}{2a}$

$= \frac{-8}{-4} = 2,$

$\frac{+10}{2} = 5$

$y = 2x^2 + 12x + 17$

0

$-17 = \frac{2x^2 + 12x}{2}$

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

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

$y = 2(x^2 + 6x) + 17$

$= 2(x+3)^2 - 18 + 17$

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

$y = 2x^2 - 8x + 13$

$= 2(x^2 - 4x) + 13$

$= 2(x-2)^2$ ~~$= 16 + 13$~~

-3

$+16 + 13$

$= 29$

$= 2(x-2)^2 - 8 + 13$

$= 5$

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

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

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

$y = 1 \quad (0,1)$

$x = \frac{-b}{2a}$

$x = \frac{-0}{4} = -1$

$y = x^2 + 2x - 2$

$x = \frac{-b}{2a}$ ∪

$= \frac{-2}{2} = -1 \quad (-1,3)$

$y = 1 - 2 - 2 = -3 \quad (0,-2)$

$= 1 - 4 = -3$

$x = \frac{-b}{2a}$

$= \frac{+8}{2 \cdot -2} = \frac{8}{-4} = -2$

$y = -2 \cdot (-2)^2 \cdot 8 \cdot (-2) - 5$

$= -2 \cdot 4 - 16 - 5$

$= -8 - 21 = -29$

$y = -2 \cdot 4 + 16 - 5 \quad (-2,3)$

$= -8 + 11 = 3$

$y \leq 3x^2 - 6x + 1$

$x = \frac{-b}{2a}$

$= \frac{6}{6} = 1$

$y = 3 - 6 + 1 = -2 \quad (1,-2)$

$y < -2x^2 + 4 + 4$ 1.4

$x = \frac{-b}{2a}$

$= \frac{-4}{-4} = 1 \quad (1,6)$

$$y = -2 + 8 = 6$$

$$x^2 - 7x + 5 = 0$$

$$x = \frac{7 \pm \sqrt{49 - 4 \cdot 1 \cdot 5}}{2}$$

$$= \frac{7 \pm \sqrt{49 - 20}}{2}$$

$$= \frac{7 \pm \sqrt{29}}{2}$$

$$x = \frac{4 \pm \sqrt{16 - 4 \cdot 25}}{2 \cdot 2}$$

$$= \frac{4 \pm \sqrt{16 - 40}}{4}$$

$$= \sqrt{-24}$$

$$(-4 - 7i)(-2 + 2i)$$

$$= 8 - 8i + 14i - 14 \cdot -1$$

$$= 8 + 6i + 14$$

$$= 22 + 6i$$

$$= -6 - 5i$$

$$(2 + i)(-3 - i)$$

$$= -6 - 2i - 3i + 1$$

$$= -5 - 5i$$

$$\frac{(3 + 2i)}{(5 - 3i)} \times \frac{(5 + 3i)}{(5 + 3i)}$$

$$= \frac{15 + 9i + 10i + 6 \cdot -1}{25 + 15i - 15i + 9 \cdot -1}$$

$$= \frac{9 + 19i}{25 - 9}$$

$$= \frac{9+19i}{+16}$$

$$= \frac{}{25+15i-15i+9}$$

$$= \frac{}{34}$$

$$\frac{(9-3i)}{(3+2i)} \cdot \frac{(3-2i)}{(3-2i)}$$

$$= \frac{12-8i-9i-6}{9-6i+6i+4}$$

$$= \frac{6-17i}{13}$$

$$= \frac{6}{13} - \frac{17}{13}i \qquad i=-1=i1$$

$$(2-j5)(1+j3)$$

$$= 2+2j^2-5j^5-j^5 \cdot j^3$$

$$= 2+2i-i+(-i \cdot -i)$$

$$= 2+i+1$$

$$3+$$

$$(2-5i)(1+3i)$$

$$= 2+6i-5i+15$$

$$= i+17$$

$$17+j$$

$$(3+2i)(9-3i)$$

$$= 12-9i+8i+6$$

$$= -i+18$$

$$= 18-j$$

$$(6+x)(2x+7)$$

$$= 12x+42+2x^2+7x$$

$= 2x^2 + 19x + 42$

$x = \frac{-4 \pm \sqrt{16 - 4 \cdot -16 \cdot 2}}{2 \cdot -16}$

$= \frac{-4 \pm \sqrt{16 + 8 \cdot 16}}{-32}$

$= \frac{-4 \pm \sqrt{16 + 128}}{-32}$ 144

$= \frac{-4 \pm 12}{-32}$

$= \frac{8}{-32} \; / \; \frac{-16}{-32}$

$= -\frac{1}{4} \; / \; \frac{1}{2}$

$\frac{-14 \pm \sqrt{14^2 + 4 \cdot 2 \cdot 60}}{2 \cdot -2}$

$= \frac{-14 \pm \sqrt{14^2 + 480}}{-4}$ 676

$\frac{-14 \pm 26}{-4}$

$= \frac{12}{-4} \; / \; \frac{-40}{-4}$

$= -3 \; / \; 10$

$\frac{-40 \pm \sqrt{40^2 - 4 \cdot 16 \cdot 2}}{-2 \cdot 16}$ 128

$= \frac{-40 \pm \sqrt{1600 - 128}}{-32}$ 289

$= \frac{-40 \pm \sqrt{498}}{-32}$

$18 \geq -16x^2 + 40x + 2$

$18 \geq -16t^2 + 90t + 2$

$9 \geq -8t^2 + 20t + 1$

$0 \geq -8t^2 + 20t - 8$

$\geq -2t^2 + 5t - 2$

$\geq -(2t^2 - 5t + 2)$ $\quad \frac{1}{2} \quad \frac{2}{1}$

$\geq -(2t-1)(t-2)$

$\geq -(2t^2 - 5t) - 2$

$t = \frac{-40 \pm \sqrt{40^2 + 4 \cdot 16 \cdot 2}}{-2 \cdot 16}$

$= \frac{-40 \pm \sqrt{1600 + 128}}{-32}$

$= \frac{-40 \pm \sqrt{(2 \cdot 2 \cdot 2 \cdot 5)^2 + 4^2 \cdot 2 \cdot 2 \cdot 2}}{-32}$

$\frac{-40 \pm 40 + 4 + 2\sqrt{2}}{-32}$

$\frac{-40 \pm 48\sqrt{2}}{-32}$

$= \frac{-5 \pm 6\sqrt{2}}{-4}$

$= \frac{\sqrt{2}}{-4} / \frac{+11\sqrt{2}}{+4}$

$-16t^2 + 90t + 2 - 16$

$= -4t^2 + 90t - 14$

$= \frac{-40 \pm \sqrt{40^2 - 4 \cdot 16 \cdot 16}}{-2 \cdot 16}$

$=$

$50 < -16t^2 + 64t + 2$

$0 < -16t^2 + 64t - 48$

$\frac{-64 \pm \sqrt{64^2 - 4 \cdot -16 \cdot -48}}{2 \cdot -16}$

$= \frac{-64 \pm \sqrt{64 - 3072}}{2 \cdot -16}$

$= -64 \pm \sqrt{-3008}$

$\frac{-64 \pm \sqrt{1088}}{-32}$

$$\frac{-64 \pm 8\sqrt{17}}{-32}$$

$$= \frac{+64 \pm 8\sqrt{17}}{32} = \frac{8 \pm \sqrt{17}}{4}$$

$1088 = 2 \cdot 544 = 2 \cdot 272 = 2 \cdot 136 = 2 \cdot 68 = 2 \cdot 34 = 2 \cdot 17$

$x = 2 \pm \sqrt{17}$

$y = -16 \times (2 \pm \sqrt{17})^2$

$26 = -16t^2 + 56t + 2$

$0 = -16t^2 + 56t - 24$

$$= \frac{-56 \pm \sqrt{16^2 - 4 \cdot -16 \cdot -24}}{2 \cdot -16}$$

$$= \frac{-56 \pm \sqrt{256 - 1536}}{-32} \quad 1600$$

$$= \frac{-56 \pm 40}{-32}$$

$$= \frac{-16}{-32} \;/\; \frac{-96}{-32}$$

$$= \frac{1}{2} \;/\; 3$$

$3(-2)^2 - 5 \cdot (-2) + 4$

$= 3 \cdot 4 + 10 + 4$

$= 12 + 14 = 26$

$y = 2 \cdot (-1)^2 + 3 - 1$

$= 2 + 3 - 1 = 4$

$-2 \cdot (-3) + 5 \cdot 6 + 5 \quad 11 + 3 = 14$

$2^2 \cdot 1 = 3$

$-4 \cdot (-1) - 8 = 4 - 8 = -4$

$3 \cdot 2^2 + 2 = 12 + 2 = 14 \cdot (-4) = -56$