

$$4x^4 - 2x^3 - 3x^2 + 3x \quad x=2$$

2		4	-2	-3	3	0
		↓	8	12	18	42
		4	6	9	21	42

find all zeros $f(x) = \underline{x^3} - 7x - \underline{6}$

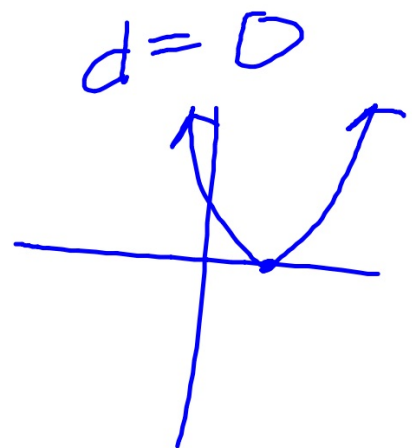
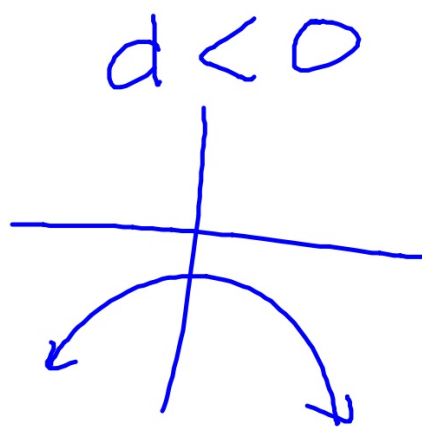
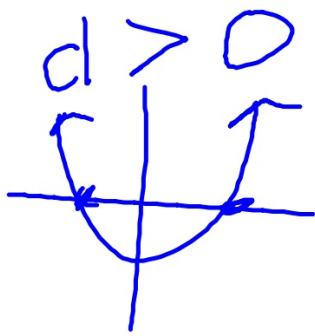
$\pm 1, \pm 2, \pm 3, \pm 6$
 ± 1

$$\begin{array}{r|rrrr} -2 & 1 & 0 & -7 & -6 \\ & & -2 & 4 & 6 \\ \hline & 1 & -2 & -3 & 0 \end{array}$$

$$\begin{array}{l} x^2 - 2x - 3 \\ (x-3)(x+1) \end{array}$$

$$\boxed{-2, 3, -1}$$

$$d = b^2 - 4ac$$



$$X^{4/3} + 1 = 17$$

$$(X^{4/3})^{3/4} = (16)^{3/4}$$

$$X = (\sqrt[4]{16})^3$$

$$X = \pm 8$$

$$\frac{3}{\sqrt[4]{2}} \cdot \frac{\sqrt[4]{8}}{\sqrt[4]{8}} = \frac{3\sqrt[4]{8}}{2}$$

$$\frac{5}{2+i} \cdot \frac{2-i}{(2-i)} = \frac{10-5i}{4-i^2} = \frac{10-5i}{5}$$

$$\frac{10}{5} - \frac{5i}{5} = \textcircled{2-i}$$

$$x^2 - 6x + 3 = 0$$

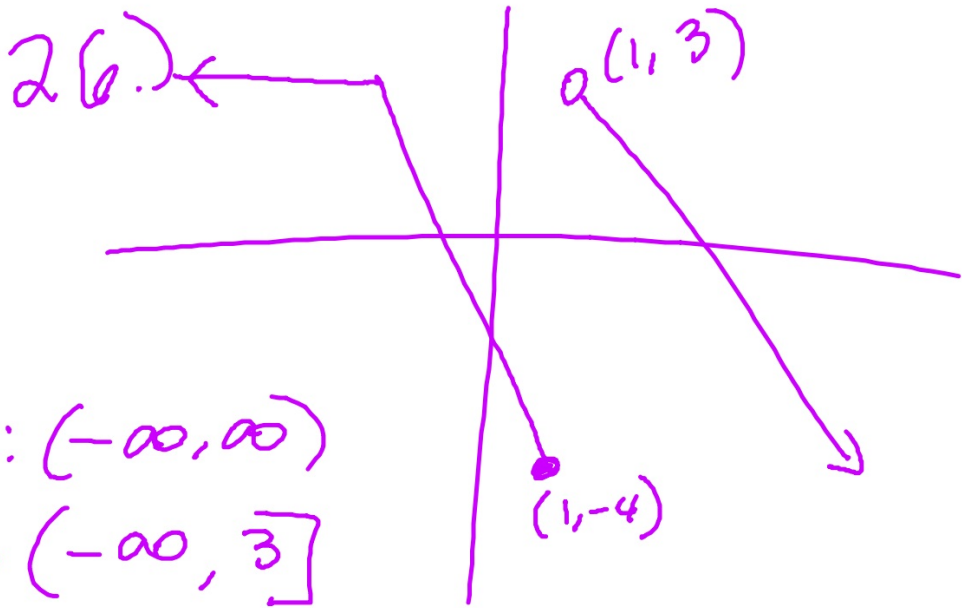
$$\left(\frac{+b}{2}\right)^2 \quad \underbrace{x^2 - 6x + 9}_{(x-3)^2} - 9 + 3 = 0$$

$$\sqrt{(x-3)^2} = \sqrt{6}$$

$$|x-3| = \sqrt{6}$$

$$x-3 = \pm\sqrt{6}$$

$$x = 3 \pm \sqrt{6}$$



$$D: (-\infty, \infty)$$

$$R: (-\infty, 3]$$

$$g(f(x)) = \frac{\quad}{\quad}$$

$$f(x) = 3x^2$$

$$g(x) = 2x^{1/2}$$

$$g(f(x)) = 2(3x^2)^{1/2}$$

$$2 \cdot 3^{1/2} (x^2)^{1/2}$$

$$2 \cdot 3^{1/2} (\sqrt{x^2})$$

$$2\sqrt{3}|x|$$

$$(x+2)^2 = (\sqrt{28-x})^2$$

$$x^2 + 4x + 4 = 28 - x$$

$$x^2 + 5x - 24 = 0$$

$$(x+8)(x-3) = 0$$

$$\textcircled{\cancel{-8}, 3}$$

$$x+2 = \sqrt{28-x}$$

$$-6 \neq \sqrt{36}$$

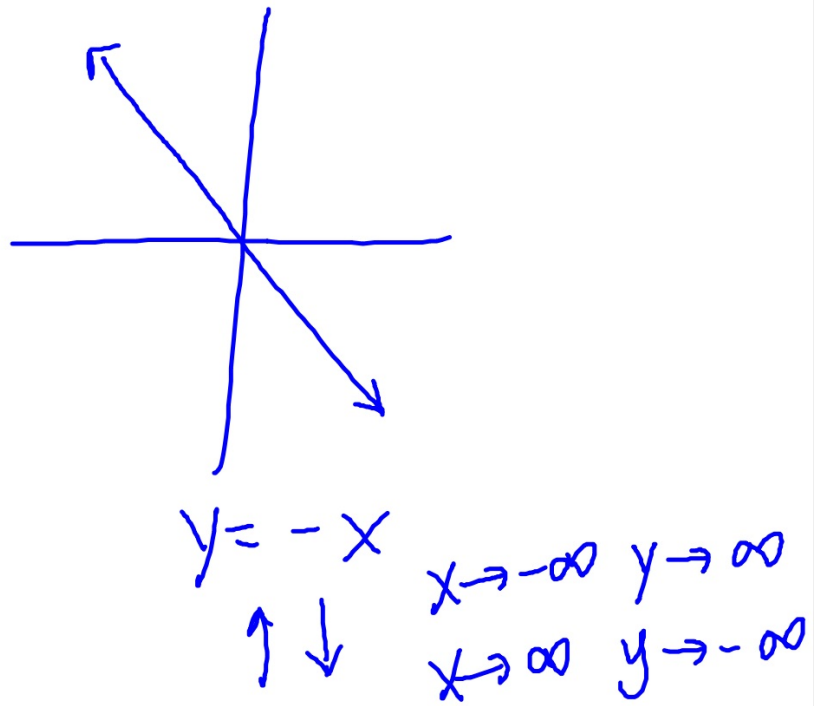
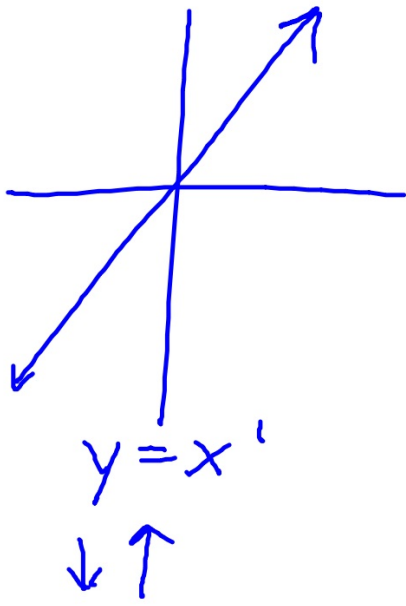
$$5 = \sqrt{25}$$

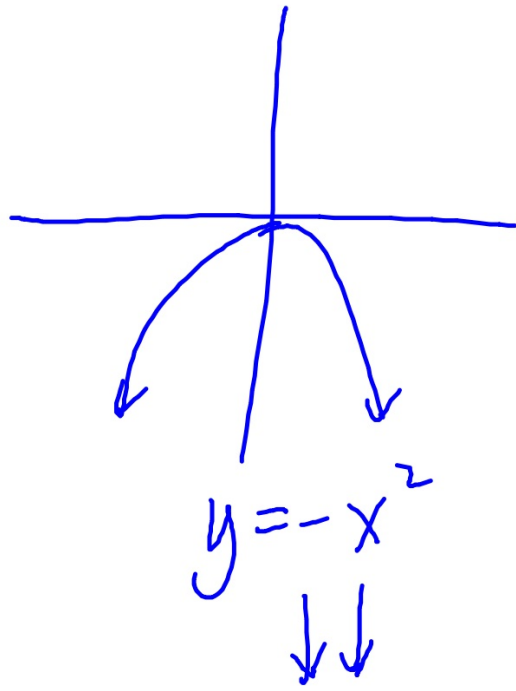
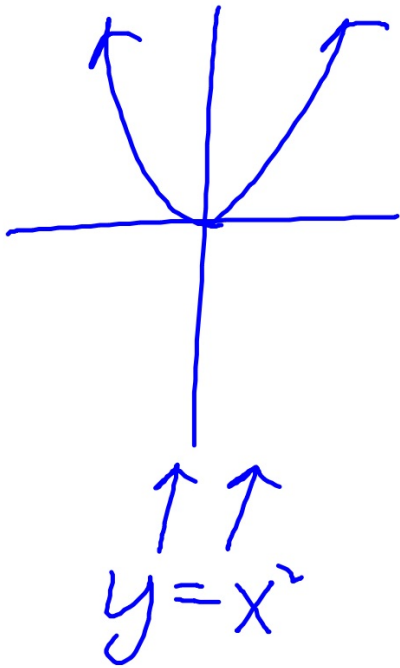
$$\sqrt[4]{32} + 7\sqrt[4]{2}$$

$$\sqrt[4]{16 \cdot 2}$$

$$2\sqrt[4]{2} + 7\sqrt[4]{2}$$

$$9\sqrt[4]{2}$$





$$\sqrt[4]{162x^{12}y^9}$$

$$\begin{array}{r} 81 \\ \times 2 \\ \hline 162 \end{array}$$

$$3|x^3|y^2\sqrt[4]{2y}$$