

$$(3) \textcircled{y} = 2x^2 + 4x + 2$$

$$\textcircled{0} = 2x^2 + 4x + 2$$

2乗 2倍 2乗

$$x^2 + 2x + 1 = 0$$

$$(x + 1)^2 = 0$$

$$x = -1$$

解が1個だけの
パターン

⇨ 点 $(-1, 0)$

グラフに接するもの
は(3)

$$(4) \textcircled{y} = 2x^2 - 5x - 3$$

$$\textcircled{0} = \textcircled{2}x^2 - \textcircled{5}x - \textcircled{3}$$

$$= \frac{-(-5) \pm \sqrt{(-5)^2 - 4 \times 2 \times (-3)}}{2 \times 2}$$

$$= \frac{5 \pm \sqrt{25 - (-24)}}{4}$$

$$= \frac{5 \pm \sqrt{49}}{4}$$

$$= \frac{5 \pm 7}{4}$$

$$= \frac{5+7}{4}, \frac{5-7}{4}$$

$$= \frac{12}{4}, \frac{-2}{4}$$

$$= 3, -\frac{1}{2}$$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

⇨ 点 $(3, 0)$

点 $(-\frac{1}{2}, 0)$

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