

2(am 0-1)

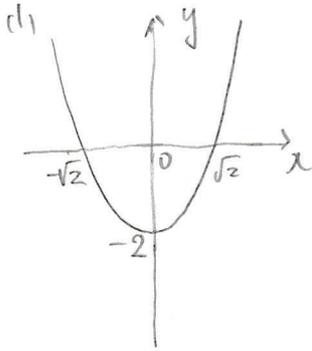
次の2次関数のグラフをかけ。また、そのグラフの軸と頂点を答えよ。

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

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

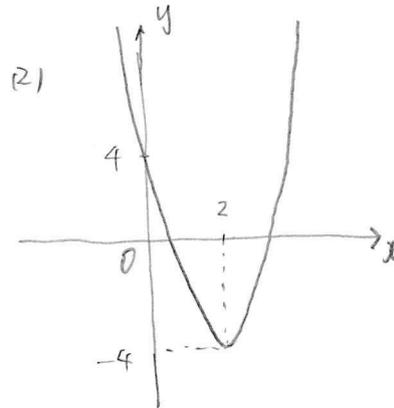
(3)  $y = -2x^2 - 6x - 5$

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



軸  $x=0$  (y軸)

頂点  $(0, -2)$

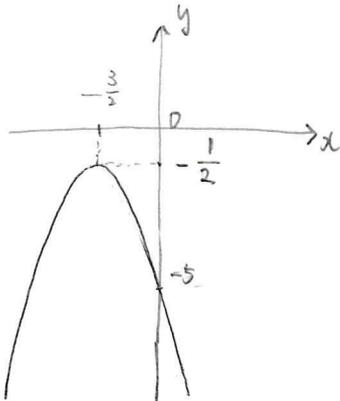


軸  $x=2$

頂点  $(2, -4)$

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

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



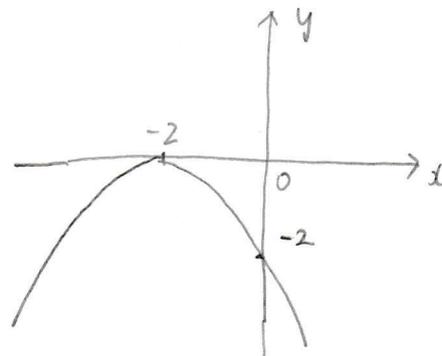
軸  $x = -\frac{3}{2}$

頂点  $(-\frac{3}{2}, -\frac{1}{2})$

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

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

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



軸  $x = -2$

頂点  $(-2, 0)$